

The Relationship between Spirituality and Sustainable Procurement in the Australian Higher Education Sector

A thesis submitted in fulfilment of the requirements for the degree of

Doctor of Philosophy

By

Mansi Mansi

Bachelors of Business Administration

Masters of International Business

School of Management

College of Business

RMIT University

Melbourne

Australia

September 2012

DECLARATION

I certify that except where due acknowledgement has been made, the work is that of the author alone; and the work has not been submitted previously, in whole or in part, to qualify for any other academic award; the content of the thesis is the result of work which has been carried out since the official commencement date of the approved research program; any editorial work paid or unpaid, carried out by a third party is acknowledged; and, ethics, procedures and guidelines have been followed.

Signature:

Mansi Mansi

Date:

ACKNOWLEDGEMENTS

I would like to express my gratitude to my spiritual guru, my parents, my husband, my family, my supervisors, my well-wishers and my friends. I thank them for their continuous support over the course of this research. My scholarly journey has gained strength from many people who I would like to acknowledge.

In particular, my sincere gratitude goes to my senior supervisor, Professor Adela McMurray. She is an outstanding researcher and a committed supervisor. She gave me the strength, vision and direction to conduct the unusual research ‘spirituality and sustainable procurement’. I am thankful to her for so many reasons that I cannot count or express. I have been very fortunate to have had the privilege to work with Adela, and am extremely grateful for this opportunity and everything that she has contributed to this research. I also thank Dr. Nuttawuth Muenjohn, who has been my second supervisor. I owe heartfelt thanks to Vud, for standing by me to the very end and for coaching me in statistical skills. I thank him for his encouragement and his unwavering attention. He is a very helpful and kind human being.

I want to thank all of my workplace colleagues and friends for their interest in my work, the encouragement they have given me, and the stimulating academic and non-academic discussions we have had in the business research area.

I was brought up in a family that flourished on philosophical and literary discussions. As a result, a spiritual quest has been my passion and my way of life and living. I thank my parents for everything they have given me. I know they will be much happier than me on the completion of this research. They are with me always in spirit.

Finally, I want to thank my husband for always standing by me, providing me tremendous support and for making my life beautiful in every sense. He is my biggest strength. I am so thankful to be able to share my life with him. *I dedicate this thesis to my loving husband 'Rakesh'.*

Finally, I want to thank my spiritual guru who was always present during this journey in spirits.

Mansi.

TABLE OF CONTENTS

| | |
|---|-----|
| DECLARATION..... | ii |
| ACKNOWLEDGEMENTS | iii |
| TABLE OF CONTENTS..... | v |
| LIST OF FIGURES | x |
| LIST OF TABLES | xi |
| ABBREVIATIONS | xiv |
| ABSTRACT | 1 |
| | |
| CHAPTER ONE | 3 |
| INTRODUCTION..... | 3 |
| 1.1: Introduction | 3 |
| 1.2: Research Objectives..... | 3 |
| 1.3: Background | 4 |
| 1.4: Research Justification | 6 |
| 1.5: Significance of the Thesis | 8 |
| 1.6: Research Questions..... | 8 |
| 1.7: Research Methodology | 10 |
| 1.8: Structure of the Thesis | 11 |
| 1.9: Terms | 14 |
| 1.9.1: Workplace Spirituality | 14 |
| 1.9.2: Sustainable Procurement..... | 14 |
| 1.10: Australian Higher Education Sector | 15 |
| 1.11: Limitations and Future Research..... | 15 |
| 1.12: Thesis Contribution | 16 |
| 1.13: Summary | 17 |
| | |
| CHAPTER TWO | 18 |
| LITERATURE REVIEW | 18 |
| 2.1: Objective | 18 |
| 2.2: Introduction | 18 |
| 2.3: Workplace Spirituality Definitions..... | 24 |
| 2.4: Distinction between Religion and Spirituality | 36 |
| 2.5: Literature Review: Workplace Spirituality | 40 |
| 2.5.1: Background | 43 |
| 2.5.2: Trends in Workplace Spirituality in the 21st century | 48 |

| | |
|--|---------|
| 2.6: Sustainable Procurement..... | 64 |
| 2.6.1: Sustainable Procurement Definitions..... | 65 |
| 2.6.2: Literature Review: Sustainable Procurement | 68 |
| 2.7: Integration of the Spirituality and Sustainable Procurement Relationships | 86 |
| 2.8: Spillover Theory | 99 |
| 2.9: Australian Higher Education Sector | 103 |
| 2.9.1:Background of Australian Universities..... | 104 |
| 2.10: Conceptual Framework..... | 106 |
| 2.11: Summary | 109 |
| CHAPTER 3 | 110 |
| METHODOLOGY | 110 |
| 3.1: Objective | 110 |
| 3.2: Research Methodology | 110 |
| 3.2.1: Quantitative Methodology | 111 |
| 3.3: Research Design | 113 |
| 3.3.1: Correlation Study..... | 114 |
| 3.4: Quantitative Research Design | 118 |
| 3.4.1: Dominance of Qualitative Research: A Gap in Literature..... | 119 |
| 3.4.2: Nature of the Thesis..... | 122 |
| 3.4.3: Alternative Method to Measure Workplace Spirituality and Sustainable Procurement..... | 124 |
| 3.5: Survey Instrument | 126 |
| 3.5.1: Human Spirituality Scale | 127 |
| 3.5.2: Sustainable Procurement Scale | 129 |
| 3.6: Other Spirituality Scales | 133 |
| 3.6.1: Spirituality Assessment Scale | 133 |
| 3.6.2: Spirituality Assessment Scale | 133 |
| 3.6.3: Spiritual Involvement and Beliefs Scale | 134 |
| 3.6.4: Spiritual Well-Being Scale..... | 134 |
| 3.7: Research Questions..... | 136 |
| 3.8: Research Questions Justification | 141 |
| 3.9: Population Frame..... | 142 |
| 3.10: Pre-Test | 146 |
| 3.11: Pilot Study..... | 146 |

| | |
|--|---------|
| 3.12: Data Collection | 148 |
| 3.13: Source of the Participants | 150 |
| 3.14: Screening and Cleaning the Data | 151 |
| 3.15: Quantitative Techniques | 152 |
| 3.16: Descriptive Analysis | 153 |
| 3.17: Pearson Correlation | 154 |
| 3.18: Independent t-test and Levene Test | 155 |
| 3.19: ANOVA (One-Way Analysis of Variance) | 156 |
| 3.20: Scale Reliability | 156 |
| 3.21: Methodological Limitations | 157 |
| 3.22: Ethical Issues | 158 |
| 3.23: Summary | 161 |
| CHAPTER 4 | 163 |
| DATA ANALYSIS | 163 |
| 4.1: Objective | 163 |
| 4.2: Introduction | 163 |
| 4.3: Result of the Pilot Study | 163 |
| 4.4: Response Rate | 164 |
| 4.5: Scale Reliability | 165 |
| 4.5.1: Internal Consistency | 166 |
| 4.6: Demographic Profile of the Population Frame | 167 |
| 4.6.1: Gender | 168 |
| 4.6.2: Age | 168 |
| 4.6.3: Educational Qualifications | 169 |
| 4.6.4: Years of Working | 170 |
| 4.6.5: Position/Job Title of Procurement Professionals | 171 |
| 4.6.6: Annual Purchasing Expenditure of Procurement Professionals | 172 |
| 4.6.7: Level of Spirituality of Procurement Professionals | 173 |
| 4.7: Relationship between Spirituality and Sustainable Procurement | 174 |
| 4.8: Mean Scores of the Dimensions of Spirituality and Sustainable Procurement | 182 |
| 4.9: Data Analysis | 183 |
| 4.9.1: Relationship between Age, Spirituality and Sustainable Procurement | 183 |
| 4.9.2: Relationship between Spirituality and Sustainable Procurement within the Different Age Categories of Procurement Professionals | 184 |

| | |
|--|-----|
| 4.9.3: Difference in the Perception of Spirituality and Sustainable Procurement within the Different Age Categories of Procurement Professionals | 185 |
| 4.9.4: Relationship between Gender, Spirituality and Sustainable Procurement | 188 |
| 4.9.5: Relationship between Spirituality and Sustainable Procurement within Male and Female Procurement Professionals | 189 |
| 4.9.6: Difference in the Perception of Spirituality and Sustainable Procurement within the Male and Female Procurement Professionals | 189 |
| 4.9.7: Relationship between Educational Qualification, Spirituality and Sustainable Procurement | 191 |
| 4.9.8 : Relationship between Spirituality and Sustainable Procurement within the Different Levels of Educational Qualification of Procurement Professionals | 192 |
| 4.9.9: Difference in the Perception of Spirituality and Sustainable Procurement within the Different Levels of Educational Qualification of Procurement Professionals | 193 |
| 4.9.10: Relationship between Annual Purchasing Expenditure, Spirituality and Sustainable Procurement | 195 |
| 4.9.11: Relationship between Spirituality and Sustainable Procurement within the Different Categories of Annual Purchasing Expenditure among Procurement Professionals | 196 |
| 4.9.12: Difference in the Perception of Spirituality and Sustainable Procurement within the Different Categories of Annual Purchasing Expenditure of Procurement Professionals | 197 |
| 4.9.13: Relationship between Position, Spirituality and Sustainable Procurement | 200 |
| 4.9.14: Relationship between Spirituality and Sustainable Procurement within the Different Position Levels of Procurement Professionals | 200 |
| 4.9.15: Difference in the Perception of Spirituality and Sustainable Procurement within the Different Position Levels of Procurement Professionals | 201 |
| 4.9.16: Relationship between Working Tenure, Spirituality and Sustainable Procurement .. | 203 |
| 4.9.17: Relationship between Spirituality and Sustainable Procurement within the Different Working Tenure of Procurement Professionals | 204 |
| 4.9.18: Difference in the Perception of Spirituality and Sustainable Procurement within the Different Working Tenure of Procurement Professionals | 205 |
| 4.10: Conclusion | 208 |
| CHAPTER FIVE | 209 |
| FINDINGS AND DISCUSSION | 209 |
| 5.1: Objective | 209 |
| 5.2: Introduction | 209 |
| 5.3: Background | 210 |

| | |
|--|-----|
| 5.4: Overview of the Relationship between the Dimensions of Spirituality and the Dimensions of Sustainable Procurement..... | 211 |
| 5.5: Contribution to the Conceptual and Theory Building Literature | 214 |
| 5.6: Overview of the Age of Procurement Professionals, Spirituality and Sustainable Procurement | 221 |
| 5.7: Overview of the Gender of Procurement Professionals, Spirituality and Sustainable Procurement | 224 |
| 5.8: Overview of the Educational Qualification of Procurement Professionals, Spirituality and Sustainable Procurement..... | 225 |
| 5.9: Overview of the Annual Purchasing expenditure of Procurement Professionals, Spirituality and Sustainable Procurement | 227 |
| 5.10: Overview of the Position of Procurement Professionals, Spirituality and Sustainable Procurement | 231 |
| 5.11: Overview of the Working Tenure (Years of Working) of Procurement Professionals, Spirituality and Sustainable Procurement | 233 |
| 5.12: Summary | 237 |
| CHAPTER SIX | 238 |
| CONCLUSION | 238 |
| 6.1: Objective | 238 |
| 6.2: Contribution to the Literature..... | 238 |
| 6.3: Key Findings | 240 |
| 6.4: Spiritual Implications for the Pursuit of Sustainable Procurement | 241 |
| 6.5: Methodological Contribution | 242 |
| 6.6: Limitations | 243 |
| 6.7: Future Research | 245 |
| 6.8: Summary | 246 |
| REFERENCES..... | 248 |
| APPENDIX A 1 | 282 |
| APPENDIX A 2 | 287 |
| PUBLICATIONS & CONFERENCES | 287 |

LIST OF FIGURES

| | |
|---|-----|
| Figure 1.1: Structure of the Thesis | 13 |
| Figure 2.1: Common Elements between Spirituality and Sustainable Procurement..... | 98 |
| Figure 2.2: Higher Education Pyramid (deewr.com.au)..... | 105 |
| Figure 2.3: Conceptual Framework..... | 108 |
| Figure 3.1: Research Framework | 117 |
| Figure 3.2: Research Questions Summary..... | 140 |
| Figure 4.1: Relationships between the First Dimension of Spirituality with Sustainable Procurement Dimensions | 176 |
| Figure 4.2: Relationships between the Second Dimension of Spirituality with Sustainable Procurement Dimensions | 177 |
| Figure 4.3: Relationships between the Third Dimension of Spirituality with Sustainable Procurement Dimensions | 178 |
| Figure 4.4: Non-significant Relationships between the Dimensions of Spirituality and Sustainable Procurement..... | 179 |

LIST OF TABLES

| | |
|---|-----|
| Table 1.1: Research Questions | 9 |
| Table 2.1: Workplace Spirituality Definitions | 32 |
| Table 2.2: Sustainable Procurement Definitions | 65 |
| Table 2.3: Common Elements of Spirituality and Sustainable Procurement | 86 |
| Table 4.1: Scale Reliability | 166 |
| Table 4.1.1: Internal Consistency | 166 |
| Table 4.2: Internal Consistency of the Human Spirituality Scale | 166 |
| Table 4.3: Internal Consistency of the Sustainable Procurement Scale | 167 |
| Table 4.4: Demographics: Gender of Procurement Professionals | 168 |
| Table 4.5: Demographics: Age of Procurement Professionals | 169 |
| Table 4.6: Demographics: Educational Qualification of Procurement Professionals | 170 |
| Table 4.7: Demographics: Years of Working of Procurement Professionals | 171 |
| Table 4.8: Demographics: Position/Job Title of Procurement Professionals | 172 |
| Table 4.9: Demographics: Annual Purchasing Expenditure of Procurement Professionals | 173 |
| Table 4.9a: Demographics: Level of Spirituality of Procurement Professionals | 174 |
| Table 4.10: Correlation Matrix between the Dimensions of Spirituality and the Dimensions of Sustainable Procurement | 181 |
| Table 4.11: Mean Scores of the Dimensions of Spirituality and Sustainable Procurement | 182 |
| Table 4.12: Relationship between Age, Spirituality and Sustainable Procurement | 184 |
| Table 4.13: Relationship between Spirituality and Sustainable Procurement within Age Categories | 185 |
| Table 4.14: Test of Homogeneity of Variances between Age Categories | 186 |
| Table 4.15: One-Way Analysis of Variance across Age Categories | 187 |
| Table 4.16: Post-Hoc Test between Different Age Categories | 187 |

| | |
|--|-----|
| Table 4.17: Relationship between Gender, Spirituality and Sustainable Procurement | 188 |
| Table 4.18: Relationship between Spirituality and Sustainable Procurement within Gender | 189 |
| Table 4.19: Independent Sample t-test: Difference between Male and Female Procurement Professionals towards the Perception of Spirituality | 190 |
| Table 4.20: Relationship between Spirituality, Sustainable Procurement and Qualification | 192 |
| Table 4.21: Relationship between Spirituality and Sustainable Procurement within Different Levels of Educational Qualification | 192 |
| Table 4.22: Test of Homogeneity of Variances between Educational Qualifications | 194 |
| Table 4.23: One-Way Analysis of Variance across Different Categories of Educational Qualification..... | 194 |
| Table 4.24: Post-Hoc Test between Different Categories of Educational Qualification .. | 195 |
| Table 4.25: Relationship between Annual Purchasing Expenditure, Spirituality and Sustainable Procurement..... | 196 |
| Table 4.26: Relationship between Annual Purchasing Expenditure, Spirituality and Sustainable Procurement..... | 197 |
| Table 4.27: Test of Homogeneity of Variances between Annual Purchasing Expenditure | 198 |
| Table 4.28: One-Way Analysis of Variance across Annual Purchasing Expenditure | 199 |
| Table 4.29: Post-Hoc Test between Different Categories of Annual Purchasing Expenditure | 199 |
| Table 4.30: Relationship between Annual Purchasing Expenditure, Spirituality and Sustainable Procurement..... | 200 |
| Table 4.31: Relationship between Position of Procurement Professionals, Spirituality and Sustainable Procurement..... | 201 |
| Table 4.32: Test of Homogeneity of Variances across Position of Procurement Professionals | 202 |
| Table 4.33: One-Way Analysis of Variance across Position of Procurement Professionals | 202 |
| Table 4.34: Relationship between Working Tenure, Spirituality and Sustainable Procurement | 204 |
| Table 4.35: Relationship between Working Tenure, Spirituality and Sustainable Procurement | 205 |
| Table 4.36: Test of Homogeneity of Variances across Working Tenure | 206 |

| | |
|---|-----|
| Table 4.37: One-Way Analysis of Variance between Different Working Tenures of Procurement Professionals | 207 |
| Table 4.38: Post-Hoc Test between Different Working Tenures of Procurement Professionals | 207 |
| Table 5.1: Findings Summary | 236 |

ABBREVIATIONS

| | |
|--------|--|
| ANZGPA | Australia and New Zealand Government Procurement |
| APCC | Australian Procurement and Construction Council |
| BS | Business Spirituality |
| CSR | Corporate Social Responsibility |
| DEFRA | Department of Environment Food and Rural Affairs |
| ECCG | European Consultative Consumer Group |
| EMG | Environment Management Group |
| HSS | Human Spirituality Scale |
| KMO | Kaiser-Meyer-Olkin |
| MWBE | Minority/Women-owned Business Enterprise |
| NGER | National Greenhouse and Energy Reporting |
| OGGO | Office of Greening Government Operations |
| OS | Organisation Spirituality |
| PSR | Purchasing Social Responsibility Scale |
| S | Spirituality |
| SEM | Structural Equation Modelling |
| SP | Sustainable Procurement |
| TAFE | Technical and Further Education |
| ULSF | University Leaders for a Sustainable Future |
| UN | United Nations |
| UNEP | United Nations Environment Program |
| WCED | World Commission on Environment and Development |
| WS | Workplace Spirituality |

ABSTRACT

This thesis has three primary objectives: First, to review the spirituality and sustainable procurement literature and address the gap that exists; second, to investigate the relationship between spirituality and sustainable procurement within the Australian higher education sector; and third, to investigate the demographic profile of this sector and its relationship with spirituality and sustainable procurement.

The workplace spirituality literature is gaining momentum; however, its existence within the Australian higher education sector is unnoticed. Similarly, procurement studies that are predominantly studied within Europe are patchy and are inconsistent within the Australian context (McMurray et al., 2009). To date, procurement studies are non-existent in the Australian higher education sector. The concepts of spirituality and sustainable procurement are still in their infancy, emerging and multidisciplinary; and the business and management literature contains no investigation of their relationship. Consequently, this thesis provides an original contribution to the existing literature.

An empirical study of 224 procurement professionals working within the Australian higher education sector confirms the relationship between spirituality and sustainable procurement. For example, dimension one of spirituality – Larger Context – is correlated with sustainable procurement dimensions such as Environment ($r=0.342$, $p=0.000$), Human Rights ($r=0.243$, $p=0.000$) and Philanthropy ($r=0.200$, $p=0.003$). Additionally, the emergent data confirms that there is a negative relationship between spirituality and sustainable procurement at the dimension level.

This quantitative thesis has a response rate of 44.50% and stands on a pre-test, a pilot study and the main study. The survey uses two highly recognised and reputed scales: the Human Spirituality Scale (Wheat, 1991) which measures spirituality; and the Purchasing Social Responsibility Scale (Carter & Jennings, 2004) which quantifies the procurement behaviour of the population frame, comprising procurement executives, procurement directors, senior procurement managers and procurement assistants. The thesis uses Pearson correlation, t-test, and analysis of variance (ANOVA) to investigate the research questions and is guided by the conceptual framework of Spillover Theory.

By addressing the relationship between spirituality and sustainable procurement in the Australian higher education sector, this thesis is one of the first empirical studies undertaken to investigate the relatively new and under-researched phenomenon of spirituality and its relationship with sustainable procurement. Thus, the thesis builds a platform for future research. The findings of the thesis have significant implications for modern organisations. Spirituality can be considered as a tool, which facilitates the sustainable and ethical behaviour within the workplace (Gupta et al., 2012).

CHAPTER ONE

INTRODUCTION

1.1: Introduction

The purpose of this chapter is to provide an introduction to the thesis. This chapter sets out the objectives and the theoretical background of the thesis, the justification for the research, the research questions; the methodology adopted, the structure of the thesis, the definitions used, the limitations of the research, the key assumptions, and this thesis' contribution to the literature.

1.2: Research Objectives

The thesis has three primary objectives:

- 1) To analyse the spirituality and sustainable procurement literature and address the gap in this literature.
- 2) To investigate the relationships between spirituality and sustainable procurement within the Australian higher education sector.
- 3) To uncover the demographic profile of the procurement professionals working within the Australian higher education sector and its relationship with spirituality and sustainable procurement.

The first objective extensively consolidates the spirituality and sustainable procurement literature and guides the thesis' investigation. The second objective provides an insight into the relationship between spirituality and sustainable procurement in the Australian higher education sector, which has not been discussed

or explored in the business and management literature. The third objective investigates the relationship between the demographic characteristics of procurement professionals and spirituality, and sustainable procurement.

1.3: Background

The literature reveals that developments in workplace spirituality, specifically in the business and management domains, is emerging (Ashmos & Duchon, 2000; Jurkiewicz & Giacalone, 2004; Sheep, 2006) and is new to the organisational literature with limited theoretical developments (Fry, 2003). The literature is developing in various directions such as measurement development (Ashmos & Duchon, 2000; Moore & Casper, 2006); concept specification (Kinjerski & Skrypnek, 2004); describing the features of organisations that facilitate workplace spirituality (Jurkiewicz & Giacalone, 2004); and the assessment of the outcomes of spirituality (Duchon & Plowman, 2005; Milliman et al., 2003). Therefore, it is too early to predict the eventual scope of workplace spirituality at this developmental stage. However, this thesis is not revisiting the foundational themes; it is advancing the field by extending its focus to examine the relationship between spirituality and sustainable procurement.

Importantly, to date the relationships between spirituality and sustainable procurement have not been studied and this thesis addresses this oversight in the literature. Hence, this thesis extends the literature by investigating the relationship between spirituality and sustainable procurement within the Australian higher education sector.

According to Rego and Cunha (2008) there is widespread interest and optimism in workplace spirituality, but empirical studies in this area are scarce. The preliminary

developments in workplace spirituality studies up to the 21st century are predominantly interpretive – establishing the theoretical and conceptual frameworks. The decade of 2000-2009 saw the emergence of workplace spirituality empirical studies such as Ashmos and Duchon (2000); Ashar & Lane-Maher (2004); Lips-Wiersma (2002); Giacalone & Jurkiewicz (2003); Rego et al. (2008); Abdullah et al. (2009) and Tombaugh et al. (2011). Probst and Strand (2010) propose that there is a greater need for workplace spirituality studies to examine its role using empirical examination to do so.

The emergence of workplace spirituality was initially in the sub-areas of management, religion, psychology and ethics, but in the 1990s this concept gained an independent standing, which is evidenced in publications of various books, journals and articles. However, despite wide interest in the workplace spirituality research area, empirical studies are still scarce (Rego & Cunha, 2008). This thesis adds greater depth to the field through empirical analysis and uses two highly reputed and reliable scales: ‘Human Spirituality Scale’ and ‘Purchasing Social Responsibility Scale’ for measuring the concepts of spirituality and sustainable procurement.

Conventional literature in the business and management field proclaims that spirituality and corporate affairs are contradictory and unrelated, but recent developments confirm that spirituality is productive. Researchers have reported relationships with several organisational outcomes (Abdullah et al., 2009; Ashmos & Duchon, 2000; Despande 2012; Giacalone & Jurkiewicz., 2003; Kazemipour et al., 2012; Milliman et al., 2003; Petchsawanga & Duchon, 2012).

Procurement studies are predominantly studied within Europe, are patchy and inconsistent (McMurray et al., 2009) within the Australian context and non-existent in the Australian higher education sector. The potential outcome of this thesis has direct relevance to contemporary organisations and particularly to the procurement sector. Future studies can extend this research to further levels and sectors. By examining the relationship between spirituality and sustainable procurement, this thesis makes a significant contribution to existing spirituality and sustainable procurement literature.

1.4: Research Justification

Although the concepts of spirituality and sustainable procurement are in their early stages of development, the recent surge in spirituality and sustainable procurement literature suggests that this area provides opportunities for growth and theory building. Spirituality has been studied in relation to organisational commitment, wellbeing, ethical decision-making, leadership, creativity, performance, leadership, workplace stress, inner peace and workplace performance. Similarly, sustainable procurement has been studied in the public and private sector, in the construction industry, the education sector, the service industry, the supply chain management and the energy sector. However, the literature overlooks the relationship between spirituality and sustainable procurement. This thesis addresses this gap in the literature.

The literature review reveals that spirituality studies in the management and business disciplines have been linked to facilitate moral behaviour, virtuous living, honesty and ethical business practices (Fry et al., 2005; Gotsis & Kortezi, 2008; Sheep, 2006). Similarly, Smith (2006) states that workplace spirituality also embraces ethics and values as it is concerned with meaningful work that can enhance ethical business

practices and encompasses social responsibility and environmental awareness (Kolodinsky et al., 2008). Thus, there is a body of literature which reveals that workplace spirituality is about honesty, ethical issues in organisations, moral activity, responsibility, and environmental awareness. The emerging research area of spirituality and sustainable procurement is broadening in the area of concept specification, meaning and particularly scientific inquiry, which justifies the investigation of the relationship between spirituality and sustainable procurement.

In Australia, scholarly research under the term ‘sustainable procurement’ is scarce but research is gaining momentum elsewhere, particularly in European countries (Fossgard-Moser, 2003; McCrudden, 2004; Michelsen et al., 2006, Walker & Brammer, 2012). Few studies to date focus primarily on sustainable procurement within the Australian context. A possible reason for this is that most of the sustainable development and procurement regulations are undertaken by the European Union and this has led to the development of sustainable procurement research within Europe. Furthermore, the spirituality literature fails to identify its relationship with sustainable procurement and this remains an important direction for research development.

The literature does not examine or discuss the relationship between the dimensions of spirituality and sustainable procurement, such as awareness, ethics, values and environment in the Australian higher education sector. By examining this relationship within the Australian higher education sector, this thesis illustrates that spirituality is well positioned in modern organisations.

1.5: Significance of the Thesis

With empirical evidence, the relationship between spirituality and sustainable procurement will gain acceptance by the academic or the organisational community. Strong empirical data and research will add additional value to the literature and increase the knowledge base. By confirming the relationship between spirituality and sustainable procurement and its association with the demographic characteristics of procurement professionals, this thesis provides evidence for future studies to validate spirituality as a business tool in achieving sustainable business practices.

1.6: Research Questions

The extensive review of the multidisciplinary spirituality and sustainable procurement literature informed the development of the research questions. These questions contribute to the existing workplace spirituality and sustainable procurement literature. There is one main research question driving the thesis and this is underpinned by 18 sub-research questions. The research questions facilitate a better understanding of the interrelationships between spirituality and sustainable procurement including, the demographic characteristics of procurement professionals.

Table 1.1 below lists the research questions:

| Table 1.1: Research Questions | |
|--|--|
| 1) Research Question 1: What are the relationships, if any, between the dimensions of spirituality and the dimensions of sustainable procurement within the Australian higher education sector? | |
| 2) Age | Research Question 2.1: Is there a relationship between the age of procurement professionals, spirituality and sustainable procurement? Research Question 2.2: Is there a relationship between spirituality and sustainable procurement among different age categories of procurement professionals? Research Question 2.3: Is there a difference in the perception of spirituality and sustainable procurement among the different age categories of procurement professionals? |
| 3) Gender | Research Question 3.1: Is there a relationship between the gender of procurement professionals, spirituality and sustainable procurement? Research Question 3.2: Is there a relationship between spirituality and sustainable procurement among male and female procurement professionals? Research Question 3.3: Is there a difference in the perception of spirituality and sustainable procurement among the male and female procurement professionals? |
| 4) Educational Qualifications | Research Question 4.1: Is there a relationship between the educational qualification of procurement professionals, spirituality and sustainable procurement? Research Question 4.2: Is there a relationship between spirituality and sustainable procurement among different levels of educational qualification among procurement professionals? Research Question 4.3: Is there a difference in the perception of spirituality and sustainable procurement among the different levels of educational qualifications of procurement professionals? |
| 5) Annual Purchasing Expenditure | Research Question 5.1 Is there a relationship between the annual purchasing expenditure of procurement professionals, spirituality and sustainable procurement? Research Question 5.2: Is there a relationship between spirituality and sustainable procurement among different categories of annual purchasing expenditure among procurement professionals? Research Question 5.3: Is there a difference in the perception of spirituality and sustainable procurement among the different categories of annual purchasing expenditure of procurement professionals? |
| 6) Position/Title | Research Question 6.1: Is there a relationship between the position of procurement professionals, spirituality and sustainable procurement? Research Question 6.2: Is there a relationship between spirituality and sustainable procurement among the different position levels of procurement professionals? Research Question 6.3: Is there a difference in the perception of spirituality and sustainable procurement among the different position levels of procurement professionals? |
| 7) Working Tenure | Research Question 7.1: Is there a relationship between the working tenure/year of working of procurement professionals, spirituality and sustainable procurement? Research Question 7.2: Is there a relationship between spirituality and sustainable procurement among working tenure of procurement professionals? Research Question 7.3: Is there a difference in the perception of spirituality and sustainable procurement among the different working tenure of procurement professionals? |

1.7: Research Methodology

This thesis investigates the relationship between spirituality and sustainable procurement within the Australian higher education sector by adopting a quantitative research methodology. Previous spirituality studies suggest that there is a need to quantify spirituality as it will overcome the limitation of conceptual frameworks and provide empirical evidence to the workplace spirituality literature. This empirical thesis employs surveys based on two highly reputed scales: 'Human Spirituality Scale' and 'Purchasing Social Responsibility Scale.' Together, they gather an in-depth understanding of the spirituality and sustainable procurement concepts.

The methodology for this thesis was developed after a review of the gaps in the literature and recommendations of spirituality and sustainable procurement literature. As stated by Giacalone and Jurkiewicz (2003), there is an urgent need for scientific inquiry into workplace spirituality. The research questions in this thesis have been designed to address this oversight.

Krahnke et al., (2003) has provided reasons as to why spirituality should be treated empirically. They state that the empirical nature of spirituality can be measured and seen as a tool to increase productivity, virtue and knowledge in businesses. Although the subjective investigation of spirituality makes it rich, participatory and meaningful, it is also important to integrate the different ways of exploring workplace spirituality. It is anticipated that diverse methodologies for workplace spirituality will supersede the limits and thus, determine many useful constructs in the future. Jurkiewicz and Giacalone (2004) also state that developments in workplace spirituality require empirical inquiry to test the theoretical formulations.

Population frame for this thesis is procurement professionals or their equivalents that participate in diverse procurement actions, decisions and procurement activities such as planning, negotiating, purchasing and contracting within the Australian higher education sector. This thesis builds upon pre-test, pilot study and main study.

1.8: Structure of the thesis

Chapter one provides an overview of the thesis and its structure. In addition, this chapter sets out the objective and the theoretical background of the thesis, the justification for the research, the research questions, the methodology adopted as the structure of the thesis, the definitions, the limitations, the key assumptions, and the thesis' contribution to the literature.

Chapter two reviews the spirituality and sustainable procurement literature primarily within the business and management disciplines. This chapter examines the spirituality and sustainable procurement conceptual developments including qualitative and quantitative studies, and definitions. This review and analysis informs the gaps in the literature and the conceptual framework used in this thesis.

Chapter three explains and justifies the research methodology used in this thesis. The thesis used a quantitative research methodology to address the research questions and test theory. This chapter identifies the research process, the survey instruments, the population frame, the data collection, the data analysis techniques, and the ethics in conducting the research.

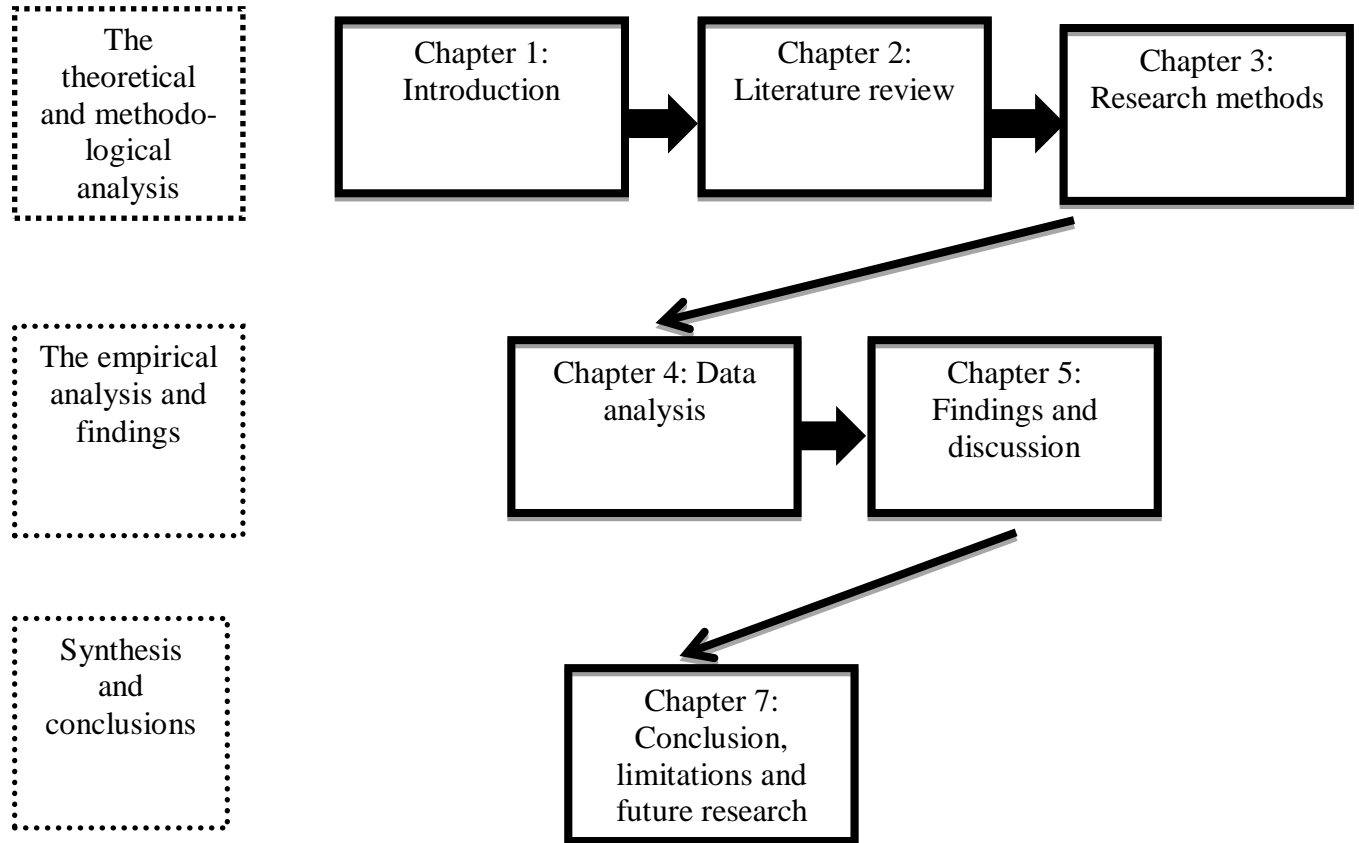
Chapter four contains the quantitative analysis of the data gathered in this thesis. This chapter is structured according to the research questions and provides answers to them. It also includes a demographic analysis of the population frame.

Chapter five provides the discussion of the thesis findings from the data analysis. It reports and interprets the results by comparing, contrasting and linking them to the existing literature.

Chapter six provides a summary of this thesis. It draws conclusions from the thesis findings and explains how the thesis met the three research objectives and contributes to the literature. The chapter sets out future research, spiritual implications and the limitations of this thesis.

Figure 1.1 on the following page presents the structure of the thesis

Figure 1.1: Structure of the Thesis



Source: Author

1.9: Terms

1.9.1: Workplace Spirituality

According to Giacalone et al., (2004) workplace spirituality is ‘a framework of organisational values evidenced in the culture that promotes employees’ experience of transcendence through the work process, facilitating their sense of being connected to others in a way that provides feelings of completeness and joy’ (p. 4). And, for Marques et al. (2007) ‘spirituality in the workplace is an experience of interconnectedness and trust among those involved in a work process, engendered by individual goodwill; leading to the collective creation of a motivational organisational culture, epitomised by reciprocity and solidarity, and resulting in enhanced overall performance, which is ultimately translated into lasting organisational excellence’ (p. 89).

1.9.2: Sustainable Procurement

Sustainable procurement is a process whereby organisations meet their needs for goods, works and utilities in a way that achieves value for money on a whole lifecycle basis to generate benefits not only to the organisation, but also to society and to the economy. It considers products and suppliers. This includes issues such as resource extraction and consumption, manufacturing and production, transport and logistics product and asset design, use and maintenance corruption, unfair competition, and ethical behaviour (Sustainable Procurement Task Force, 2006).

Sustainable procurement means buying products and services that have a high environmental relief potential and that have been produced in a socially responsible way, for example, respecting ILO core conventions. These products and services have a

smaller ecological footprint. Sustainable procurement takes into account the costs and benefits that occur over the whole lifecycle of a product (UNEP, 2005).

1.10: Australian Higher Education Sector

The Australian higher education sector comprises:

- 39 universities of which 37 are public institutions and two are private
- One Australian branch of an overseas university
- Three other self-accrediting higher education institutions
- Non-self-accrediting higher education providers accredited by state and territory authorities, numbering more than 150 as listed on State and Territory registers.

The population frame for this thesis is procurement professional such as procurement directors, procurement executives and procurement assistants working within 39 Australian universities, which is the total number of universities in Australia.

1.11: Limitations and Future Research

While a significant relationship was confirmed between the dimensions of spirituality and sustainable procurement within the Australian higher education sector, this thesis is subject to the typical limitations of quantitative research, cross-sectional research, and surveys. It does not deliver narrative information about the perception of procurement professionals and the spirituality and sustainable procurement relationship. Also, quantitative results can be too abstract, although they are independent of the researcher's bias. As the study is conducted in the higher education sector, this poses a limitation and

future studies may like to consider other contexts and as well as employing multiple research methods. Future research can extend this concept to other sectors using multi-method research methods.

1.12: Thesis Contribution

The findings of this thesis provide a significant contribution to the existing spirituality and sustainable procurement literature by addressing the relationship between spirituality and sustainable procurement within the Australian higher education sector. The current thesis adds empirical evidence to the existing conceptual and theory building literature. It opens a new avenue of spirituality and sustainable procurement in a way that will enable organisations to practice spirituality as a tool to enhance holistic sustainability benchmarks. The thesis contributes to the broad sustainability concept that is constantly evolving and developing, by establishing a future-oriented pragmatic conceptualisation of the spirituality and sustainable procurement relationship. In this way, it strengthens the workplace spirituality concept and establishes a sound theoretical framework.

This thesis also contributes to the Australian higher education sector. It revealed the demographic profile of the procurement professionals, which the literature does not address and its relationship with spirituality and sustainable procurement. The thesis confirms that the majority of the procurement professionals believe that they are spiritual in their beliefs. Hence, the findings of this thesis have practical implications for long-term procurement executives and managers. The implementation of spirituality can be considered a relatively inexpensive way to achieve sustainable procurement. This thesis also has implications for sustainability scholars who approach the sustainability crisis by integrating social and wellbeing dimensions.

1.13: Summary

This chapter provided an introduction and overview of this thesis. It set out the objectives of the research, research questions, research methodology, and the justification and contribution of this thesis. Moreover, the chapter presented the need to investigate the relationship between spirituality and sustainable procurement in the Australian higher education sector.

CHAPTER TWO

LITERATURE REVIEW

2.1: Objective

The objective of this chapter is to review the spirituality and sustainable procurement literatures to provide a deeper understanding of the multifaceted concepts. It reviews previous studies, identifies the gaps in the literature, and provides theoretical constructs and the scope of new knowledge to be explored. It will also compare and evaluate the workplace spirituality and sustainable procurement developments in the literature and address theory that can ascertain the relationship between spirituality and sustainable procurement in the Australian higher education sector.

2.2: Introduction

The concept of spirituality within the workplace was considered irreconcilable (Tischler, 1999), because the early industrialised organisations were primarily concerned with productivity, revenue generation and efficiency (McCallum, 1856; Smith, 1776; Towne, 1886) and were considered to be places where employees were assigned to address such tasks (Jacques, 1996). However, recent literature suggests that spirituality is making forays within the business and management disciplines.

Recently, the literature has encompassed and employed holistic values, such as wellbeing, sustainability and zero waste; hence, the face of contemporary business and management literature is experiencing a shift from a rationalist to a values-based business

environment. Noticeable interest in the concept of spirituality at work within the management and business disciplines did not begin until the middle of the 20th century, which was reflected in the thinking of theorists and practitioners as they started to connect individual growth and organisational success (Shafritz & Ott, 1996).

Senge (1990) observed that the workplace gradually witnessed the renewed introduction of terms such as creativity, teamwork, wellbeing and work life balance and, simultaneously, recognised spirituality in the workplace. Although, the concept of workplace spirituality is still relatively new (Vandenberghe, 2011), Cash et al., (2000, p. 123) noted that: 'Business periodicals are filled with articles heralding both the renewed interest in religion and the growing emphasis on spirituality in society in general and in the workplace'.

According to Benefiel (2008, p.14), 'Management, Spirituality and Religion (MSR) work has expanded over the years since the 1990s'. It is published in contemporary and modern business literature (Daniel, 2010; Delbecq, 2003); and is gaining increased attention within organisations (Shinde et al., 2010).

The workplace spirituality phenomenon appears to have originated in America (Hicks 2003), but the recent trend shows that it has also attracted resurgence in other scholarly geographical domains such as Europe and Australasia. The term 'spirituality' appears to be a notion of the East, but corporate America has responded to workplace spirituality research and development enthusiastically (Carver-Sekeres, 2008; Joseph Rowntree Foundation, 2002). The literature shows that until the 1990s, workplace spirituality literature was too scarce and inadequate to postulate any further assumptions related to it,

but current trends reveal that it has expanded across several disciplines such as psychology and health. The study of workplace spirituality is also now emerging in the field of organisational theory (McKee et al., 2008).

The literature reviews of the two concepts – ‘spirituality’ and ‘sustainable procurement’ – commenced by searching for the keywords associated with the concepts such as organisational spirituality, spirituality at work, workplace spirituality, organisational spirit, corporate spirituality, holistic development, organisational consciousness, mindful workplace, sustainable progress, interconnectedness, sustainable thinking, eco-friendly purchasing and decision-making, wholeness and wellbeing, work/life balance, spirit at work, and conscientious business. A systematic search in different databases including ABI Inform, Expanded Academic ASAP, Proquest, Emerald, Science Direct, and Google Scholar generated more than 20 million related topics to these keywords.

The initial search highlighted the multi-dimensionality of spirituality and sustainable procurement because both of these subject areas are studied across a number of disciplines such as education, defence, health, business and the financial sectors (Fernando, 2005). The literature indicates that spirituality studies are also well established in other disciplines such as health, theosophy and psychology, but this thesis specifically addresses the literature review in the business and management disciplines. The coverage of spirituality in other disciplines is outside the scope of this thesis.

Dean and Fornaciari (2007) compiled 231 peer-reviewed empirical journal articles (1996–2005) and summarised that research into management and spirituality is found in

the fields of management, ethics, social work, education, religion, nursing and psychology. Therefore spirituality is a multidisciplinary domain (Liu & Robertson, 2011).

Authors such as Abraham Maslow, Mary Parker Follet and Robert Greenleaf are the most influential thinkers who contributed directly or indirectly to the workplace spirituality domain (Quatro, 2002). For Maslow, the highest qualities of values are associated with self-actualisation. The literature states that such theorists have provided new avenues for research – one of them being spiritual necessity in the workplace. Simultaneously, global business leaders and gurus talked about the essential overriding themes such as eco-spirituality, organisational consciousness, collective responsibility, value-based responsibility, organisational spirit, ecological wholeness and team spirit, leading organisations to recognise spirituality and its various applications.

According to Fernando (2005), Maslow's expressions on spiritual technologies, spiritual life, cosmic consciousness, peak expressions and transcendence have given a substantial platform to the contemporary workplace spirituality. Maslow (1943) believed that people have deeper needs than survival and if these deeper needs are ignored this will affect the overall productivity and the ability of a person to self-actualise. It is still unclear how spirituality made forays into the business and management disciplines, but the literature suggests that early thinkers such as Maslow paved the way to the workplace spirituality concept.

Fornaciari and Dean (2009, p.5) state that 'any new field of inquiry struggles with problems such as domain uniqueness, research methodologies, construct definition and operationalisation'. This is reflected in the field of workplace spirituality. For example in

Australia, as noted, the research addressing workplace spirituality is scant and is still in the early stages of development compared to that of America, and spirituality and sustainable procurement have not been studied as a relationship in any of the literature both Australia and overseas. Literature confirms that there is more workplace spirituality studies in America (Mitroff & Denton, 1999; Fleming, 2003; Marques, 2006, 2008) compared to Australia.

In the last 20 years, it appears that business fundamentals such as profit maximisation, competitive advantage, wealth maximisation and revenue-governed developments are no longer the prime objectives of any modern organisation (Kristoffersen et al., 2005). Contemporary organisations are now governed by new conceptions such as sustainability, responsibility, wellbeing and ethics. Marques (2008) states that this phenomenon is a global shift, leading towards global interdependency in which giant organisations operating in multiple continents are exposed to divergent cultures and are necessarily adopting a geocentric perspective, irrespective of ethnocentric mindsets. Such changes in the mindset of giant global organisations are also creating the need to encourage the practice of the workplace spirituality concept.

Authors such as Barrett (1998), Bolman & Deal (1995), Briskin (1996), Harman (1992) and Sanford (1992) have also illustrated that there is a paradigm shift in the workplace that has replaced the traditional view of organisations as a machine (Ciancutti & Steding, 2000). Some authors comment on a worldwide development in adopting a more holistic approach to managing organisations and in particular for the incorporation of spirituality within the workplace (Ashar & Lane-Maher, 2004). Commenting on the wave of spirituality at the workplace, Ashmos and Duchon (2000) called this a ‘major

transformation' where organisations have a special place for the 'spiritual dimension that leads to meaning, purpose and a sense of community. This embodies the search for simplicity, meaning, self-expression and interconnectedness' (Marques et al., 2007, p.93). Giacalone et al., (2004) states that early efforts to understand workplace spirituality began in the early 1990s when it appeared in books, articles and special journal issues (e.g., *Journal of Managerial Psychology*, *Journal of Business Ethics*, *Journal of Management Inquiry*, *Journal of Management Education*, and the *Journal of Organisational Change Management*).

Decades ago, Alvin Toffler, in his book *Future Shock*, referred to technology as a third wave and Wagner-Marsh and Conley (1999) similarly have suggested that spirituality has entered into organisation as a fourth wave, surpassing Toffler's technological third wave. This phenomenon can be seen in the growing number of multinational organisations such as Coca-Cola, Boeing and Sears that have incorporated spirituality in their organisational workplace objectives, strategies and culture (Burack, 1999; Gagoi, 2005; Konz & Ryan, 1999; Wagner-Marsh & Conley, 1999). In these ways, modern organisations are integrating faith, patience, intuition and humility (Thompson, 2005).

Some researchers find it crucial for organisations to prioritise spirituality such as Korten (1995) who emphasised that large multinationals should reconstruct their basic framework of economic beliefs to include a spiritual dimension 'in order to restore democracy and the rights and freedom of people and communities' (p. 308).

For some this is a ‘Great Turning’ (Macy,1998) where a transition in society is taking place in the form of a shift from control, dichotomy and oppression to holism, diversity, harmony and reciprocity (Lincoln, 2000). They refer to a global shift in the way that organisations work as the corporate world is enriched with new concepts such as organisational spirituality, organisational spirit, organisational consciousness, business vales and ethics, work life balance, universal sustainability and holistic wellbeing.

The sustainable procurement literature is predominantly focused on the government sector including construction, energy, service and the education sectors. As the review of the literature suggests, spirituality and sustainable procurement are multidisciplinary and the possible reason for this is that it has a wide range of application and scope, although it is perceived as a highly demanding research/study area. The literature also shows that spirituality and sustainable procurement are highly complex and cumbersome terms in relation to definitions and features. It is complex because spirituality is a highly subjective term and sustainable procurement is a multi-meaning term comprising human rights, philanthropy, sustainable buying and purchasing.

The next section discusses the workplace spirituality definitions and literature.

2.3: Workplace Spirituality Definitions

This section addresses the workplace spirituality definitions predominantly used in the business and management literature. There are several expressions in the literature that point toward spirituality such as ‘organisational spirituality’, ‘spirituality at work’, ‘spirit at work’, ‘workplace spirituality’, ‘business spirituality’ and ‘spirituality’. Studies have used these terms to infer workplace spirituality. The interchangeable use of these terms in

the literature has led to a situation where the differences and similarities of the many meanings of spirituality have not been identified.

Furthermore, the literature does not suggest specific reasons for the variance of terms used for workplace spirituality. Instead, the inference is that although workplace spirituality is called by different names, their fundamentals are similar to one another and they also complement each another. To date, spirituality literature in management and business disciplines has not identified the reason why there is no uniformity of definition of the term 'spirituality'.

Consequently, in this thesis, the term 'spirituality' embraces a range of different synonyms of spirituality as used in the business and management literature. In addition, it also investigates the individual spirituality of procurement professionals, or their equivalent working within the Australian higher education sector. Most authors in this field suggest that it is only individual and personal spirituality at the workplace (Houston & Sokolow, 2006; Speck, 2005) that combines with others to form workplace spirituality.

Within the business and management literature, there is an abundance of 'spirituality at work' definitions and Markow and Klenke (2005) confirm that there are more than 70 definitions of spirituality at work. While there is no universally accepted and widely used definition of spirituality at work, there are various ways to define spirituality. In this thesis, the terms used are confined to those that exist in the business and management disciplines. It is beyond the scope of this thesis to accommodate those used in other disciplines.

Delving into the definitions of spirituality, Aponte (2002, p. 16) states that ‘Spirituality is a universal dimension of life that lends a meaning to our existence, sets a moral standard for living and assumes some sense of moral connection among people at the very heart of humanity’. For Haug (1998, p. 182), spirituality is ‘a personal, internalized set of beliefs and experiences which is not simply identical with the generic terms ‘beliefs’ and ‘belief systems’ but indicates particular beliefs that tend to impact four areas of a person’s cognitive, affective, behavioural and developmental dimensions’. Walsh’s (1998) definition of spirituality involves the notion of transcendence as for him spirituality involves transcendent beliefs and practices. Spirituality at work is about expressing the inner life in the workplace by seeking meaningful work and feeling connected with other human beings (Harrington et al., 2001). It provides energy at the workplace and the enthusiasm to work cordially with others as it creates meaning in professional life (Moxley, 2000).

The literature review shows that there is no universal definition of spirituality at the workplace, and consequently, the attempt to define this concept has led to a richer exploration of the meaning, broadening and enhancing the existing business and management literature. This enhancement occurs because new definitions bring new terminology and expressions, which generate new thought, add value to the contemporary organisations, academia and corporate world, and eventually form a basis for future research.

As noted, it is well understood and accepted that spirituality has a multiplicity of meanings, and hence there is no single definition. This thesis does not attempt to define various types of spirituality or differences in layers of spirituality because this is beyond

its scope. Instead, it takes a generalist approach and aggregates the various workplace spirituality definitions. As Karakas (2009) states, spirituality is mostly described as an idiosyncratic, multi-faceted, elusive concept and is difficult to capture in one definition. Future studies may investigate the similarities and differences among various spirituality definitions. The literature review suggests that the meaning of workplace spirituality varies from author to author and there is no universal definition of this term. However, Karakas (2009) noticed that the workplace spirituality literature is divided into two camps. On the one hand for example, spirituality is anti-materialist (Gibbons 2000; Lips-Wiersma, 2002) and anti-positivist (Lund et al., 2003). On the other hand, some argue that the inclusion of spirituality within the workplace can enhance performance, profit and productivity. The relationship between spirituality and sustainable procurement will further confirm the practical use of spirituality in workplace settings.

Neal (1997) suggested that the reason why it is difficult to define spirituality is because it is like trying to objectify and categorise an idea that is very subjective and beyond categorisation and, as a result, there are many definitions of workplace spirituality. According to Butts (1999), what is needed is ‘sufficient clarity and theoretical understanding of the meaning of spirituality’ and how it can apply to work especially in concepts of personal satisfaction, peak performance and overall business success that can also enrich communities, cultures and the earth itself (p. 328). However, spirituality at the workplace lacks universal definition and sometimes the definitions depend on one’s epistemological and ontological assumptions (Franz & Wong, 2005); therefore it can be said that the meaning and use of the term varies according to the purpose and need of the study. In the same vein, Kinjerski and Skrypnik (2004) argue that one of the real

problems in pursuing spirituality research is the lack of a clearly and widely accepted definition.

The literature shows an abundance of spirituality definitions, causing some degree of confusion and frustration (Carrette & King, 2004; Eisner & Montuori, 2003; Hire, 2005; Klenke, 2003). One reason is that workplace spirituality definitions are abstract, universal and inconclusive (Gibbons, 2000). Furthermore, for Gibbons (2000) there is a fundamental weakness due to the lack of clear definition and conceptualisation within the literature.

Spirituality is ambiguous in scope, and so is the definition of spirituality (Kahnweiler & Otte, 1997; McGhee, 1998) and it is easier to justify and explain what spirituality in business does not stand for, but more difficult to sort out what spirituality at the workplace does stand for (Labbs, 1995).

For Neck and Milliman (1994, p. 9):

Work Spirituality is expressing our desires to find meaning and purpose in our lives and is a process of living out one's set of deeply held personal values and involves existential questions such as (1) Why am I doing this work? (2) What is the meaning of the work I am doing? (3) Where does this lead me? and (4) Is there a reason for my existence and a reason for the organisation's existence?

Smith (2006, p. 3) says that 'spirituality at work is about the commitment of business professionals to awaken the soul at work and eventually to transform the workplace where life is nourished'.

Another definition of spirituality at the workplace states that it is the 'recognition that employees have an inner life which nourishes and is nourished by meaningful work

taking place in the context of the community' (Ashmos & Duchon, 2000, p. 137). For some, spirituality at the workplace is concerned with organisational phenomenon – how individual spirituality is manifested within an organisational culture (Grant, 2004).

A highly referenced definition of workplace spirituality is suggested by Giacalone and Jurkiewicz (2003, p. 13):

Workplace spirituality is a framework of organisational values evidenced in the culture that promotes employees' experience of transcendence through the work process, facilitating their sense of being connected to others in a way that provides feelings of completeness and joy.

Spirituality impacts on the workplace (Perrone et al., 2006) and work is an avenue in which to find meaning in life (DeKlerk, 2005). Spirituality is 'carried over into the workplace, transforming the individual spiritual crusade from a personal pursuit to a business practice' (Klenke 2003, p.58) and satisfying human needs at the workplace (Moore & Casper, 2006).

Individuals spend most of their time devoting and investing themselves in their workplace (Fairholm, 1996) and similarly, they want a fulfilled life by bringing their whole selves to their jobs by mingling their spirituality with their jobs (Dehler & Welsh, 2003).

Mitroff and Denton (1999) conducted a landmark workplace spirituality multi-method study that also involved 90 in-depth interviews with high-level managers and executives.

Below are fragments from the respondents' definitions of spirituality:

Spirituality in [the] workplace is universal and timeless... It embraces everyone no matter what their age, beliefs, creed, gender, race, religion, sexual orientation and so on... It provides one with an inexhaustible source of faith and willpower by providing strength to carry the good fight for righteous cause (p. 25).

The quotes indicate that spirituality is recognised by high-level managers and executives. Although, it is not feasible to include all the definitions provided by Mitroff and Denton (1999), it does confirm that spirituality at work is multi-dimensional and multi-meaning. It also concords with the definitions supplied by the academic literature.

Correspondingly, Ferguson (2009) describes spirituality at the workplace in three words: wholeness, meaning and connection. She explains that, with the experience of wholeness, our authentic self, our true nature, our centre, reflects the inner light which is the best expression of who we are. Meaning at work is doing things that make a difference and this gives us energy to keep going under adversity. Lastly, Ferguson (2009) states that the connection with something greater than us, such as a larger mission or a richer connection to co-workers or clients, results in the enjoyment of the work. Therefore, when an employee finds wholeness, meaning and connection in what he or she does, he or she works spiritually.

Blot (2010) uses two different terms to express spirituality at work: Organisational Spirituality (OS) and Business Spirituality (BS). Although, he does not explain why he uses two different terms, his work suggests that both the terms (OS and BS) hold the same meaning and intention. Blot (2010) further finds that business spirituality is a paradoxical concept. Although similar to organisational spirituality, he clarifies that business spirituality deconstructs the belief that business is solely for profit and self-interest. Business spirituality restores intrinsic motivations in the organisations and searches for wisdom in economics. He summarises that organisational spirituality 'is a logistic system on three levels': the level of doing, the interaction level and the psychological level. It is the spiritual energy that connects the different levels and

ultimately creates a harmonious whole culminating in the interaction of the physical, mental and spiritual planes.

The attempt to define spirituality within the workplace has taken an interesting turn as authors are relating this concept to wholeness, wellbeing, connection, awakening, inner light and more. For example, a new definition has been formulated by Pandey and Gupta (2008, p. 6): ‘Spirituality is defined as harmony with oneself and with the social and natural environment and it is a potential every human is born with’. They have brought the social and environment component into the definition. Blot (2010) also incorporates the term ‘spiritual energy’, thus extending the meaning of the term.

To summarise the ‘spirituality at work’ definitions, the following table lists the widely used definitions in business and management disciplines in chronological order. This shows that varying terminology is used for spirituality at work such as ‘organisational spirituality’, ‘workplace spirituality’, ‘spirituality at work’ and ‘spirit at work’. Table 2.1 also highlights the development and building of spirituality definitions over time. In the 1990s it was seen as something that is personal, purposeful and mostly related to an individual’s inner life. In the late 1990s and early 2000s, the application of spirituality was more precise and multi-dimensional and associated with meaning, wholeness at the workplace, organisational values, performance and wellbeing.

Table 2.1: Workplace Spirituality Definitions

| Country | Author | Definition |
|---------|-------------------------------|--|
| USA | Neck and Milliman 1994 | ‘Work spirituality is expressing our desires to find meaning and purpose in our lives and is a process of living out one’s set of deeply held personal beliefs’ (p. 9). |
| USA | Fox 1994 | ‘Understanding spirituality at work begins with acknowledging that people have both an inner and outer life and that nourishment of the inner life can lead to a more meaningful productive outer life’ (p.34). |
| USA | Ashmos and Duchon 2000 | ‘Recognition that employees have an inner life which nourishes and is nourished by meaningful work taking place in the context of the community’ (p.137). |
| USA | Harrington et al. 2001 | ‘Spirituality at work is not about religious beliefs. Rather, it is about people who perceive themselves as spirited beings, whose spirit needs energising at work. It is about experiencing real purpose and meaning in their work beyond pay checks and task performance. Spirituality is really about people sharing and experiencing some common attachment, attraction, and togetherness with each other within their work unit and the organisation as a whole’ (p.156). |
| USA | Giacalone and Jurkiewicz 2003 | ‘Workplace spirituality is a framework of organisational values evidenced in the culture that promotes employees’ experience of transcendence through the work process, facilitating their sense of being connected to others in a way that provides feelings of completeness and joy’ (p.13). |
| UK | Brown 2003 | ‘Workplace spirituality is intended to provide a means for individuals to integrate their work and their spirituality, which, it is alleged, will provide them with direction, connectedness and wholeness at work’ (p.396). |
| USA | Marques 2005 | ‘Spirituality in the workplace is an experience of interconnectedness and trust among those involved in a work process, engendered by individual goodwill; leading to the collective creation of a motivational organisational culture, epitomised by reciprocity and solidarity, and resulting in enhanced overall performance, which is ultimately translated in lasting organisational excellence’ (p.891). |
| USA | Kolodinsky et al. 2008 | ‘Workplace spirituality can be viewed as the incorporation of one’s own spiritual ideals and values in the work setting’ (p.466). |
| USA | Tombaugh et al. 2011 | ‘Within an organisational environment, spirituality is a dynamic process that goes beyond need fulfilment to include the active expression of spiritual beliefs and values. Workplace spirituality includes the integration of personal spiritual needs and values into the everyday work environment through thoughts and actions that reflect and nourish those needs and values’ (p.148). |
| India | Dasgupta 2011 | Workplace spirituality isn’t just about allowing employees to practise their faith or meditate in a designated corner of the office. It is about incorporating values, beliefs in the work lives to increase productivity and efficiency. |
| Taiwan | Bhunja and Das 2012 | Organisational spirituality is the establishment of the identity and concerns shared within an organisation. |
| India | Gupta et al.2012 | ‘Workplace Spirituality’ is neither anti-business nor practice of personal spirituality at workplace, as believed by some. It is harnessing the characteristics of the “spirit” in the work environment and conducting business in a socially responsible manner which promotes internal and external co-creation and development’ (p.54). |

Source: Author

The literature suggests that the definitions by Mitroff and Denton (1999), Giacalone and Jurkiewicz (2003) and Ashmos and Duchon (2000) are the most cited and widely discussed definitions in the literature. Some academics say that spirituality is intrapersonal and comes from within the person (Krishnakumar & Neck, 2002). Some extend further by connecting spirituality to the cosmos (Pandey & Gupta, 2008).

Fry et al., (2005) links spirituality to leadership and distinguishes the two key processes of spiritual leadership. The first creates a vision and the second establishes a social organisational culture. According to Fry, vision is that which incites leaders and followers to experience a sense of calling which gives meaning to their lives. Referring to organisational culture, Fry emphasises the 'value of altruistic love that gives leaders and followers a sense of belongingness and appreciation' (p.620).

Harrington et al., (2001) aggregated the definitions in three different streams. The first stream is the personal inner experience based on the interconnectedness advocated by Mitroff and Denton (1999). The second stream focuses on principles, virtues, ethics, values, emotions, wisdom, and intuition (Dehler & Welsh, 1994; Kriger & Hanson, 1999; Marcic, 1997; Wagner-Marsh & Conley, 1999). This depends on the degree to which these qualities are expressed. The third stream encompasses a relationship between the personal inner experience and its manifestations in outer behaviours, principles, and practices. This stream has been linked to human behaviour and performance (Harlos, 2000).

Although the literature is ambiguous in its use of the terms ‘spirituality’, ‘workplace spirituality’, ‘spirituality at the workplace’ and ‘spirit at work’, researchers focus on the fact that the meaning of the terms are similar to one another.

The literature emphasises that the notion of spirituality is not a new concept. It was already present and discussed among theologians, philosophers, metaphysicians, scholars, scientists, academicians, occultist and many ancient spiritual seekers. Einstein (1950, p. 5) provided some glimpses of spirituality by stating that: ‘A human being is part of the whole...he experiences himself, his thoughts and feelings, as something separated from the rest: a kind of optical delusion of his consciousness’. Einstein did not discuss spirituality directly, but mentions consciousness, compassion and unity. Patanjali (born around 150 BC), the founder of Yogic Philosophy, stated that conscientious living transcends mind limitations and expands consciousness which is beyond the selfish living (Iyengar, 1990, p. 57). Szejely (1974) references dormant forces, faculties and talents that become alive with the self-discovery of a far greater person than you have ever dreamed yourself to be. Developments in spirituality are centuries old and hence the term is not a pristine concept; it is simply being rediscovered and applied in the disciplines of management and business.

For an individual, according to Smith (2006) the vision of workplace spirituality is a workplace where everyone feels safe and secure. It also involves a transformation of the society so that positive values of spirituality are welcomed as human assets in every workplace, irrespective of whether it is a profit or non-profit-making, religious or non-religious organisation.

As discussed above, spirituality is a multi-dimensional concept, and there is no unique way to follow it because there are hundreds of possible ways of being spiritual (Beazley, 1998). For Mirvis (1997, p. 198) 'people are spending more of their time working and number among their closest friends their co-workers'. Giacalone and Jurkiewicz (2003) find it necessary to take into account the time that an individual spends at the workplace and also whether he or she derives his or her social identity from their workplace.

McKee et al., (2011) report a sense of disagreement over how to best study workplace spirituality and how to define it. The literature review of workplace spirituality definitions and interpretations reveals some interesting trends. First, there is confusion regarding the terminology. The literature is inconsistent in using similar terms for workplace spirituality. Second, workplace spirituality is interpreted on two levels; the individual and organisational levels, and there is no clarification of them. Third, spirituality at work is associated with a wide range of constructs that attempt to define the vivacity of the concept, so that spirituality at work is linked to responsibility, wellbeing, and meaning in life, ethics, personal growth, values and inner peace. Fourth, the literature review shows that spirituality is being researched in several disciplines, thus it is multidisciplinary.

Arising from a review of the literature, it is clear that the meaning of spirituality is vast and varies from individual to individual and discipline to discipline. The miscellaneous characteristic of spirituality has resulted in a surfeit of definitions and explanations. Although the literature illustrates the surge in books, publications and journal articles on spirituality within the workplace, authors in these publications do not agree on one common definition of workplace spirituality.

2.4: Distinction between Religion and Spirituality

This section highlights the discussion of the union and separation of religion and spirituality. For some authors, there is a clear distinction between religion and spirituality, whereas for others, there is an inseparable union between them.

In this thesis, there is a need to distinguish between the two concepts because the association is not relevant to the objectives of the thesis and can cause confusion. These concepts sound similar and are often perceived as identical and overlapping in their meaning and approach. This thesis considers that spirituality in the religious context is a different concept and hence, the foundation of spirituality is not dependent on religion; it is independent and not a by-product or offshoot of religion. Consequently, the religious beliefs of procurement professionals are not investigated. The relationship between spirituality and sustainable procurement within the Australian higher education sector is the issue to be addressed, where spirituality is not to be confused with religion.

The definitions of religion and spirituality are abundant in the literature but, for some authors, religion and spirituality are entirely unrelated concepts (Bacchus & Holley, 2004). There is a great deal of debate and discussion in the literature about the relationship between spirituality and religion. However, it is not clear whether any relationship exists between spirituality and religion, whether religion and spirituality are independent of each other, or whether there is a connection between them. Hicks (2002, 2003) propose that religion is an integral part of spirituality and both are related, thus spirituality at the workplace implies religion at the workplace. Opposing this, Hill and Smith (2003) contend that workplace spirituality is not associated with religion, but they cannot be entirely separated from each other. Joseph (1988) articulates that religion is an

‘external expression of faith comprised of beliefs, ethical codes and worship practices’ (p. 44) whereas Canda (1988, p. 243) proposes spirituality is about the ‘human quest for personal meaning and mutually fulfilling relationships among people, the non-human environment and for some God’.

An interesting discussion exists that leads to a dilemma in how to study the degree of the relationship between spirituality and religion. Researcher believes that this is an entirely subjective issue and there are dissimilar notions attached to spirituality and religion. Such notions consequently lead to a challenge for the researcher – how to differentiate spirituality from religion. Some authors find these two concepts are universally conjoined while others find that they are separate concepts. Although both spirituality and religion search for the sacred (Zinnbauer et al., 1999), ‘Religion consists of beliefs, actions and institutions which assume the existence of supernatural entities with powers of action, or impersonal powers or processes possessed of moral purpose’ (Bruce, 1996, p.7). For Eckersley (1999), spirituality is a deep intuitive phenomenon related to the sense of relatedness and connectedness to the world/universe in which we live, whereas religions are social institutions with rigid and sclerotic institutional inertia and lack any higher purpose.

For Harrington et al., (2001, p. 158): ‘Spirituality at work is not about religious beliefs. Rather, it is about people who perceive themselves as spirited beings. It is about experiencing real purpose and meaning in their work beyond pay checks and task performance’.

In a similar vein, ‘spiritual concerns are not synonymous with religious ones; they are separate from participation in and the sharing of beliefs with any particular religious groups’ (Veatch & Chappell, 1991, p.143). To view spirituality at the workplace from the lens of religious tradition is divisive (Cavanagh, 1999) and does not accord with the social, legal and ethical foundations of business and public administration (Nadesan, 1999). Translating spirituality at the workplace into religion ‘will foster zealotry at the expense of organisational goals, offend constituents and customers, and decrease morale and job satisfaction for employees’ (Giacalone & Jurkiewicz, 2003, p.42). Religious fundamentals are based on faith whereas spirituality does not espouse any belief or divine providence. For these and other researchers, religion and spirituality are not identical (Cavanagh & Bandsuch, 2002; Mitroff & Denton, 1999).

The highly referenced and comprehensive *Handbook of Workplace Spirituality and Organisational Performance* (Giacalone & Jurkiewicz, 2003) navigates workplace spirituality literature and theories, religion and ethics. It explores the theories and ‘applications of workplace spirituality and contends that workplace spirituality based on religion is ill-defined and untestable and therefore cannot contribute to a scientific body of knowledge’ (Ashforth & Pratt, 2003, p.96). Similarly, Hartsfield (2003) argues that spirituality, unlike institutionalised religion, is individualistic, operating in and through a person privately.

Wills (2009) denies the compatibility of spirituality and religion, stating that they are different concepts as spirituality does not need to be affiliated to any specific church or faith or belief in God. For him, spirituality refers to matters of the spirit, in particular, people’s sense of life to find one’s path.

The difference between religion and spirituality is advanced to the next level by the landmark study conducted by Mitroff and Denton (1999). This study found that a growing number of Americans consider themselves spiritual but not religious. The survey revealed that 60 % of the respondents ‘had a positive view of spirituality and a negative view of religion’ (p. 39), while 8 % held a negative view of both. Mitroff and Denton (1999) conducted more than 90 in-depth interviews with high-level managers and executives who believed strongly that unless organisations learn how to harness the ‘whole person’ and the immense spiritual energy that is at everyone’s core, they would not be able to produce world-class products and services. The respondents strongly believed that religion and spirituality are different. Also, in this study, the use of spirituality was viewed as highly appropriate and religion inappropriate. Religion was viewed as dogmatic, intolerant and dividing people more than bringing them together.

In the same vein, this thesis also investigates the level of spirituality of procurement professionals working in the Australian higher education sector. The different levels of spiritual categories in the survey instrument used are: ‘strongly spiritual’, ‘spiritual’, ‘medium’, ‘unsure’, and ‘not spiritual’.

The literature contains a degree of confusion about the relationship or non-relationship between spirituality and religion. Current business and management literature is also of the view that these two concepts are independent and not related. Although for some authors, the historic root of spirituality lies in religion, in contemporary organisations and workplaces, spirituality is most often not associated with any particular religious tradition (Cavanagh, 1999).

One of the most prominent and highly respected Buddhist leaders of this century, the Dalai Lama (1999, p. 517), states:

Spirituality is basically concerned with constructive psychological concepts such as emotion, love, compassion, tolerance, contentment, responsibility, faith, harmony and loyalty with one's surroundings; it is different from religion because religion is concerned with tradition, faith, rituals, customs and formalised ideas and practices.

Long- standing studies such as Beazley (1998), Endyke (1999), Trott (1996) and Banks (1980) do not find any relation between spirituality and religion. They make a distinction between the two as, according to them, spirituality is multi-dimensional. Smith (2006, p. 4) states that 'Religion involves the system of thought and the practice through which many people express their spirituality. It includes specific beliefs and worship practices related to a specific understanding or definition of God'.

The literature indicates that spirituality and religion are often used interchangeably, but in this thesis the view is that there is a difference between them. The lack of agreement in the literature stems from the issue being viewed as subjective, involving different thoughts, cultures, beliefs and ideas. Whether spirituality and religion are dependent or interdependent, however, still remains a challenge for future researchers.

2.5: Literature Review: Workplace Spirituality

This section addresses workplace spirituality studies in the business and management disciplines. It reviews the literature that includes searching for conceptual developments and the qualitative and quantitative progression of workplace spirituality studies.

According to LaFountain and Bartos (2002, p.8), there are five important aspects of the literature review in any research project:

1. Defining the parameters of the investigator's field
2. Placing the research question in perspective
3. Learning which methods and instruments have been useful and which have less potential
4. Avoiding unintentional interpretation of previous studies
5. Placing researchers in a better position to interpret the significance of their own results.

The literature shows that workplace spirituality studies are predominately US-based across a number of disciplines such as business, health, social sciences, theology and education. Hence, there is a variance in the application and scope of the spirituality concept within several disciplines. Particularly in the business and management disciplines, authors argue that society seeks a spiritual and transcendental explanation to tumultuous collective and business changes (Mitroff & Denton, 1999). This has led to a growing social consciousness and spiritual renaissance (Inglehart, 1977; Nael & Vallejo, 1998) and consequently a growing interest in eastern philosophies (Brandt, 1996) has resurfaced in the dimensions of spirituality. Although, workplace spirituality studies are gaining momentum, to date there has been no study that addresses the relationship between spirituality and sustainable procurement within the Australian higher education sector.

As previously noted, workplace spirituality studies in the business and management domain are in the early stages of development (Ashmos & Duchon, 2000; Jurkiewicz & Giacalone, 2004; Sheep, 2006) and new to organisational literature with limited theoretical developments (Fry, 2003). Several subcategories have emerged, including measurement development (Ashmos & Duchon, 2000; Moore & Casper, 2006), concept specification (Kinjerski & Skrypnek, 2004), the description of features of organisations that facilitate workplace spirituality (Jurkiewicz & Giacalone, 2004) and the assessment of the outcomes of spirituality including its limitations (Duchon & Plowman, 2005; Milliman et al., 2003). Therefore, it is too early to predict the future scope and direction of workplace spirituality studies.

Early predication will restrict the potential dimensions of the workplace spirituality concept as it is emerging and studied in various contexts such as organisational commitment, leadership, wellbeing, stress, self management, productivity, ethical decision making, virtues, wisdom, holistic development, performance and development. Kolodinsky et al., (2008) summarises that the study of workplace spirituality is still in its infancy and lacks a clear disciplinary framework. Thus, workplace spirituality is studied with organisational commitment, ethics, and leadership.

There are various terms available in the literature to address workplace spirituality. This inconsistency acts as a barrier because it distracts from the focus of the concept and leads to confusion. However, in this thesis, the diversity of existing terms will be considered in order to make a consistent contribution to the general literature.

2.5.1: Background

The noticeable development in spirituality at the workplace began in the early 1990s. Its emergence occurred in the sub-areas of management, religion, psychology and ethics, but then gained an independent standing, which is evident in the various books, journals and articles on this subject published during this period.

According to Rego and Cunha (2008) there is wide interest and optimism in exploring workplace spirituality, but empirical studies in this area are still scarce. The preliminary developments in workplace spirituality studies are mostly qualitative, giving rise to the theoretical and conceptual frameworks. The developments in workplace spirituality empirical studies are more recent and include Ashmos and Duchon (2000), Ashar and Lane-Maher (2004), Giacalone and Jurkiewicz (2003), Lips-Wiersma (2002) and Rego and Cunha (2008). However, the existing empirical studies do not include any rigorous empirical studies with scale reliability within Australian workplace settings.

Probst and Strand (2010) state that workplace spirituality studies are scanty and need empirical examination. Studies such as Tombaugh et al. (2011) and Abdullah et al., (2009) have contributed to this area by empirically examining workplace spirituality. This thesis is a response to that needs through an empirical investigation of the relationship between spirituality and sustainable procurement the Australian higher education sector.

The conventional literature asserts that spirituality and corporate affairs are contradictory and unrelated; however, recent developments confirm that spirituality is productive (Tombaugh et al., 2011) with considerate relationships with several organisational outcomes reported (Abdullah et al., 2009; Ashmos & Duchon, 2000; Giacalone &

Jurkiewicz, 2003; Milliman et al., 2003). These authors report that spirituality has the potential to provide constructive benefits to the society, organisations and other disciplines. The outcomes of this thesis, discussed in detail on Chapter 6, represent a significant contribution to the existing spirituality and procurement literature. Future studies may extend spirituality to some deeper levels such as ethical decision-making and social responsibility.

The overwhelming interest in spirituality at the workplace research is widely observed in scholarly journals including the *Journal of Organisational Change Management*, the *Journal of Business Ethics*, and the *Journal of Management, Spirituality and Religion*. Similarly, the Academy of Management has also opened a special stream for workplace spirituality. Such developments contradict the implication that spirituality has no practical and scientific relevance to the workplace (Klerk, 2005). This thesis responds to the repeated calls from workplace spirituality scholars to explore new avenues and domains that can affect modern organisations. Although Peters and Waterman (1982) did not specifically use the term ‘spirituality’ in their early research, their findings demonstrated that spiritually successful companies that harnessed the concept of a ‘contribution to the greater good’ outperformed those that did not. Much later, Management Guru Peter Drucker (1988) made the same connection by stating that management should be seen as a higher spiritual ground.

The decade of the 1990s saw the emergence of various related concepts such as ‘soulful business practices’, ‘spiritual leadership’, ‘corporate consciousness’, ‘mindful organisations’, and ‘intuitive leadership’. Poole (2009) states that this qualitative development contributed to the literature by demonstrating the broad ‘why and how’ and

that subsequent literature advanced with more quantitative studies. Both qualitative and quantitative developments contributed in demonstrating the relevance of spirit-friendly workplaces and the rise of spirituality at the workplace.

Goertzen and Barbuto (2001) contend that ‘spirituality is addressed through several paradigms: self-actualisation and spirituality, purpose and meaning in life and spirituality, health and wellness as outcomes of spirituality, spirituality in the workplace and spirituality and leadership’ (p.19). Concurrently, spirituality at the workplace studies are examined in relation to several terms such as ‘spiritual leadership’, ‘spirituality-driven organisational culture’, ‘wellbeing and productivity of employees’, ‘organisational efficiency’, and ‘ethical decision-making’.

Spirituality studies within the workplace settings are not linear. For example, Heaton et al., (2004) states that spirituality at the workplace has two complementary approaches: subjective and objective. Both approaches vary in the technique of their investigation; subjective methods involve conducting self-referral research inside one’s consciousness and require personal participation as the instrument for transformational change in organisations. On the other hand, objective methods consider conducting research in which spirituality in organisations is the object of qualitative or quantitative research. Heaton et al., (2004) also states that there are two ways to approach change: ‘inside-out’ and ‘outside-in’. The traditional approach to change was ‘outside-in’ meaning moving from the outside to counter change. The ‘inside-out’ means change in individual’s knowledge of the spiritual foundation of life and then having the necessary foundation to develop consistent ways to change the organisation.

As discussed above, early progress in the workplace spirituality domain and particularly in the business and management disciplines were conceptual developments such as ‘institutive leadership’, ‘dharmic management’, and ‘soul of the business’. Harman (1992) noticed the concept of intuitive leadership and Cannon and Edmondson (2005) noted that the soul or spirit of organisations is the CEO and his or her spirit progress using storytelling, shared experiences and collective circles. Furthermore, examining the conceptual developments of spirituality, Hawley (1993) identified ‘Dharmic management where leadership is spiritual because a leader seeks to liberate the best in people and ‘best’ is linked to one’s higher self’ (p.43). Each organisation has its own collective dharma (organisation inner law) and it should be based on courage, self-discipline and doing the right thing.

Jacobson (1994) conducted a doctoral study using the Delphi technique on nine experts on an international basis to explore the relationship between spirituality and transformational leadership. The majority were of the view that spirituality plays an important role in their personal and professional activity. In the same year, Neck and Milliman (1994) discussed the leaders and their employee’s intuitive abilities, personal growth and workplace performance. They stated that there are a number of ways in which spirituality can influence employees’ organisational performance and that spirituality can lead individuals to experience consciousness at deeper levels, as well as enhance their perceptions of the company’s potential.

After one year, Conger (1995) engaged spirituality as a key to retaining balance, stating that it is the reflection on spirituality that maintains a wonderful balance between a person’s internal and external life. The dark side, such as anxiety, uncertainty and

ambiguity in one's nature, can be balanced and countered by positive factors, such as the awareness and sense of interconnectedness through spirituality.

With this progress, some interwoven developments were discussed by Fairholm (1996). He argues that it is important to meet inner needs in order to feel job satisfaction and also points out that there is a growing demand and need in the workplace to celebrate the wholeness and completeness of life. With the increase in the flow of workplace spirituality studies, the old taboo of separating spirituality from the workplace, from science, and from business is reducing rapidly.

Workplace spirituality in business and management disciplines achieved new research focus through a breakthrough study by Mitroff and Denton (1999). Their study conducted 90 in-depth interviews with high-level managers and executives. It was the first study that congregated vast data using both qualitative and quantitative methods and techniques, revolutionising the workplace spirituality concept. Earlier literature was predominantly qualitative, even though a few quantitative studies did exist, they did not use rigorous empirical techniques. This study established that those individuals and organisations that recognised themselves as spiritual scored better on the scales developed by Mitroff and Denton than those that perceived themselves as less spiritual. Their book, *Spiritual Audit of Corporate America*, is widely recognised within the workplace spirituality domain. This thesis further extends their study by addressing the gap in the workplace spirituality and procurement literature. Consequently, future organisations will be able to see that the relationship between spirituality and sustainable procurement is both credible and desirable.

Korac-Kakabadse et al., (2002) find that the concept of spirituality at the workplace is now necessary due to the contemporary lack of motivation and unfriendly workplace cultures that lead to individuals feeling that their workplaces have become insecure environments with growing instability, downsizing, re-engineering, and restructuring of jobs. They further argue that spirituality can motivate a person or an individual to be more focused, independent and integrated with his or her work environment.

The literature has addressed significant workplace spirituality developments from 1990-2000, but to date there is no research that investigates the dynamics between spirituality and sustainable procurement. George et al., (2000) studied psychological wholeness and the increasing impact of spirituality as a construct to contribute to mental and physical health. Conventional spirituality literature was limited to religion or the spiritual quest, but recently spirituality has become a strong presence within workplace settings, organisations, offices and boardrooms.

2.5.2: Trends in Workplace Spirituality in the 21st Century

Advanced developments in the new century, including Bierly et al., (2000), elaborates on the importance of spirituality and argues that spirituality enhances wisdom in two ways. First, it facilitates wisdom by clarifying goals and objectives and provides a foundation of core beliefs and holistic knowledge of one's purpose of life, 'including a strong sense of integrity, truth and reflection. Second, spirituality provides faith, courage and hope, which facilitate wise decision-making and actions by providing guidance and reassurance' (p.599).

Delving deep into the workplace spirituality literature, Harrington et al., (2001) contends that workplace spirituality is positively associated with the sense of fulfilment in employees, which leads to sustain organisational goals and energises people toward greater output. The study used a Likert scale-type questionnaire to develop a survey instrument, *Finding Meaning and Purpose at Work*, with a sample of graduate students; Cronbach's alpha was also determined to identify the level of reliability. Thus, the workplace spirituality trend developed from qualitative to quantitative studies involving quantitative developments, including reporting Cronbach's alpha value (Ashmos & Duchon, 2000; Harrington et al., 2001; Mitroff & Denton, 1999). Quantitative studies, such as Kolodinsky et al., (2008) and Milliman et al., (2003) used spirituality scales to measure workplace spirituality (discussed in the later part of this section). These quantitative developments were not limited to business and management disciplines; they also occurred in the education, health and defence sectors.

Spirituality is also studied in conjunction with career development (Lips-Wiersma, 2002) and the concepts of 'becoming self', 'expressing self' and 'serving others'. Similarly, Lamont (2002) investigated the terms 'soul health of workplaces' and 'soul friendly companies'. Milliman et al., (2003, p.430) related 'three workplace spirituality dimensions (work, sense of community and value alignment) to explain five work attitudes: affective organisational commitment, intentions to leave, intrinsic work satisfaction, job involvement, and organisational based self-esteem'. Nur (2003) used case study research to investigate the role of spirituality in organisational management in his thesis, which compared two management approaches 'Traditional Management Principles (TMP)' and 'Management by Virtue (MBV)'. He concluded that companies that follow MBV principles are more likely to create a culture of organisational

commitment, higher job satisfaction and more changes of organisational citizenship behaviour, leading to a more positive organisational outcome.

Cavanagh and Bandsuch (2002) provided many examples of business leaders, including CEOs, who believed that spirituality is about moral habits, covenantal relationship and generous character. Klenke (2003) proposed that managers and employees feel the necessity to restore wholeness and balance in the workplace. His study indicates several benefits for practising spirituality at the workplace that are not limited to but include self-actualisation, retention, organisational motivation, individual creativity and teamwork. In the same year, Brown (2003) found that spirituality at work had several positive outcomes. It promotes wholeness and integration, includes ethics and aesthetics in the workplace, assists in the development of emotional and spiritual competence, encourages holistic ways of working, and develops community at work.

Furthermore, Wolf (2004) states that with the increase in spirituality at the workplace it is possible that interest in ethics, values, relationship building, and workplace life balance will increase and hence the leaders will be more productive and positive, creating a good quality work zone. Therefore, the dimension of spirituality in business and management literature was extended in 2003 and gathered momentum with the inclusion of self-actualisation, workplace balance, productivity and ethics.

In 2003, *The Handbook of Workplace Spirituality and Organisational Performance* (Giacalone & Jurkiewicz, 2003) published 32 articles on workplace spirituality. This compilation marked the beginning of a subcategory of scientific investigation of workplace spirituality and explored the possibility of spirit-work connection – measurable

aspects of spirituality and maximising organisational performance due to spirituality. The book proposed that workplace spirituality appears to be influenced by events that may be clustered into three thematic areas:

1. Turmoil in society and business, which in turn spurs individuals to seek spiritual solutions to the consequent tension
2. A profound change in values globally
3. Broader spiritual changes taking place in connection with the growing interest among Americans in Eastern philosophies.

Furthermore, Giacalone and Jurkiewicz (2003) found that workplace spirituality enhances ethical practices in business. The US-based study involved a sample of 162 employees to measure the relationship between individual spirituality and perceptions of unethical business activities such as the exploitation of natural resources, discrimination in jobs, the acceptance of bribes, unequal pay for equal jobs, and dishonesty in advertising and promotion. Although this study used a single instrument (Human Spirituality Scale) measuring a generic conceptualisation of spirituality, the authors suggested that a new window for future studies could be related to ethical judgement. This thesis also utilises the Human Spirituality Scale to investigate the relationship between spirituality and sustainable procurement. Giacalone and Jurkiewicz, (2003, p. 11) suggest that workplace spirituality has the potential to enhance the ethical climate (ethics is a component of sustainable procurement) in organisations and management practices, without adversely affecting employee concerns. To date, the conceptualisation of spirituality has not been extended to sustainable procurement. In a similar vein, Sheep (2006, p. 358) notes that

workplace spirituality ‘introduces a number of ethical issues and dilemmas for organisations’.

In 2003, the process of organisational development and transformation through spiritual leadership was reported in the literature. Fry (2003) developed a causal theory of spiritual leadership within an intrinsic motivation model. The model integrated altruistic love, theories of workplace spiritualities, spiritual survival, vision, hope and faith. The study built upon spiritual leadership theory and created a spiritual leadership vision that empowered individuals as well as teams leading to organisational commitment and productivity. ‘The purpose of spiritual leadership is to create vision and value congruence across the strategic, empowered team and individual levels and ultimately, to foster higher levels of organisational commitment and productivity’ (Fry, 2003, p. 693). ‘Top management leadership’ is one of the dimensions of sustainable procurement and its relationship with spirituality is consequently investigated in this thesis.

In the following year, Fry (2004) extended spiritual leadership theory as a predictor of ethical and spiritual wellbeing as well as corporate social responsibility (CSR). Fry extended his work (Fry et al., 2005) by testing the Spiritual Leadership Theory (SLT) causal model in a longitudinal study. The model postulated positive relationships among the qualities of spiritual leadership, spiritual survival, and organisational productivity and commitment. Fry et al., (2005) found that spiritual leadership is congruent with a strategy that ultimately fosters higher levels of organisational commitment, productivity and employee wellbeing. They uncovered optimistic associations between the qualities of spiritual leadership, spiritual survival and organisational productivity and commitment. Earlier, Dehler and Welsh (1994, p. 20) stated that ‘leaders bring their spirituality to the

workplace and are a source of inspiration to the employees to transcend their self-interest for the welfare of their organisational members’.

Fry’s spiritual leadership studies involved rigorous quantitative analysis and informed the reliability of the instrument. The studies involved the measurement of three dimensions of spiritual leadership and two dimensions of spiritual survival. Organisational commitment and productivity were also measured. The survey instrument exhibited an adequate coefficient alpha reliabilities range between 0.83 and 0.93 (Fry et al., 2005). Similarly, Marques (2006) believes that spiritual leadership (Wolf, 2004), moral leadership (Thompson, 2005), authentic leadership (Beagrie, 2005) and ethical leadership (Brown et al., 2005) are some of the many ways that proclaims the spiritual mindset in the workplace as a responsible leadership. Thus, the literature from 2003–2005 highlighted the relationship between spirituality, CSR, leadership, ethics, commitment and productivity. Similarly, Reave (2005) reviewed the workplace spirituality literature and summarised that literature is supportive of the view that spiritual values and effective leadership are dependable on each other.

Another empirical study conducted by Milliman et al., (2003) examines the relationship between workplace spirituality and prevalent employee job attitudes (meaningful work, sense of community, alignment of values, organisational commitment, intention to quit, intrinsic work satisfaction and job involvement). The study also addresses the validity and reliability of each measure. The relationship between workplace spirituality and employee job attitudes shows a significant amount of reliability with Cronbach’s alpha value ranging from 0.82 to 0.94. Following a similar pattern to Milliman et al., (2003) and (Fry et al., 2007), this thesis uses two highly reliable scales to reveal the

interrelationships between spirituality and sustainable procurement and the reliability of the survey instrument.

Zohar and Marshall (2004) redefined the terms 'wealth', 'profit' and 'advantage' as being underpinned by spirit. They state that when individuals have higher motivations, they make a difference within the workplace. For example, leaders using their spiritual intelligence to create spiritual capital in the organisational culture can enrich the deeper aspects of employee's lives and draw upon deeper meaning and values including responsible behaviour.

Duchon and Plowman (2005) conducted an exploratory study showing that workplace spirituality varies from person to person in workplaces and work performance is being associated with work spirituality. In studying medical units, the Duchon and Plowman (2005) study found that work unit performance is associated with work unit spirituality. The study also used the workplace spirituality instrument.

Fornaciari et al., (2005) analysed 29 empirical articles from the years 1996-2004 that used 65 new scales and reported interesting trends in research. First, only 45 % of the studies report factor analysis for evaluation of constructs. Similarly, only 45 % of the studies reported the Cronbach's alpha value and reflected that in detail using statistical rigour. The study also found that 38 % reported scant information related to scale evaluation, and the majority of the pre-existing spirituality scales were produced outside the management and business disciplines. They concluded that the theoretical progress of workplace spirituality could be enhanced if the majority of the workplace studies provided information on item and scale development.

In the context of the developments of spirituality in the business and management disciplines, Grant et al., (2004) asserts that spirituality improves the quality of life and therefore has relevance within workplaces. Their study was conducted in a university hospital and the respondents were 91% female nurses; 88 % of these nurses said that they are highly spiritual.

Similarly, Bacchus and Holley (2004) positively linked workplace spirituality with the enhancement of personal strength, inner peace and guidance. Richards et al., (2006) linked workplace spirituality with workplace stress and found that with the increase in workplace spirituality there is a decrease in workplace stress. Hence, workplace spirituality may be inversely related to workplace stress.

Another study conducted by Fernando and Jackson (2006) found that workplace spirituality enhances decision-making in the workplace. Their study comprises 13 interviews with prominent Sri Lankan business leaders such as chairpersons and managing directors of diverse ethnic backgrounds from Buddhist, Christian, Hindu and Muslim traditions. The study concluded that the majority of the leaders explained their spirituality on the basis of their religious faith. Also, they conclude that religion has an important role to play and it influences judgements, and emotional and motivational qualities including decision-making. This thesis does not associate spirituality with religion, and does not ask the procurement professionals interviewed about their religious faiths and beliefs.

Thus, the literature demonstrates that spirituality is studied in organisational settings in relation to its role in enhancing leadership skills, decision-making and making sound judgements (Fry, 2003).

Kolodinsky et al., (2008) stated that the application of spirituality in the business ethics literature could be viewed from an individual, organisational, or interactive perspective. They conducted a study that provided a new dimension to workplace spirituality. This rigorous empirically tested study (N=74) involved spirituality scales called the Human Spirituality Scale (HSS) and the Organisational Spiritual Values Scale (OSVS). HSS is also used in this thesis. The study concluded that organisations that foster spiritual values and culture reap significant workplace benefits such as job involvement and organisational identification. Using HSS, this thesis examines individual spirituality – not organisational spirituality – of procurement professionals, including their demographic characteristics and relationship to sustainable procurement.

Rhodes (2006, p.2) states that workplace spirituality:

1. Emphasises sustainability
2. Values contribution
3. Praises creativity
4. Cultivates inclusion
5. Develops principles
6. Promotes vocation.

According to Rhodes (2006) these six characteristics can help in understanding the role that spirituality can play in organisations such as bringing values with them and

positively impacting on the bottom line. Rhodes (2006) included sustainability as one of the characteristics of spirituality. Thus, he posits that there is a relationship between spirituality and sustainability because spirituality has the potential to contribute to the greater good for this planet; and this can simultaneously increase market value and attract investors (Rhodes, 2006). Hence, the literature shows the compatibility between spirituality and ethics.

Similarly, Wills (2009) empirically found that spirituality enhances satisfaction, wellbeing and helps to increase virtues in one's life. This study used a Personal Wellbeing Index and reported the reliability of the instrument (the Cronbach's alpha for PWI was 0.76). It is important to note that the workplace spirituality empirical literature from 2000 onwards frequently uses pre-developed scales and informs its reliability.

In a similar vein, Fernando et al., (2007) examined the ethical ideologies of senior managers working in the Australian Stock Exchange. The study did not stand on spirituality but used two scales – the 'Ethics Position Questionnaire' and the 'Corporate Ethical Value Questionnaire' – identifying levels of idealism and relativism in Australian managers and explaining their variations.

Addressing the workplace spirituality developments in 2008, Rego and Cunha (2008, p.61) state that 'when people experience workplace spirituality, they feel more effectively attached to their organisations and experience a sense of obligation and loyalty towards their organisation'. Furthermore, Gehrke (2008) found that workplace spirituality has a direct and positive relationship with leadership skills and Fawcett et al., (2008) stated that workplace spirituality also has the potential to increase work attributes. These three

studies involved rigorous empirical and statistical techniques to measure the impact of spirituality within the workplace settings. This thesis follows this trend and empirically examines spirituality of procurement professionals within the 39 Australian universities.

Pandey and Gupta (2008) conclude that there are three types of organisations based on their level of consciousness: First, the market-conscious organisation that aims for profitability, efficiency and market share. Second, the socially conscious organisation whose main objectives are concerned with partnering with customer and supplier. Third, the spiritually conscious organisation that stands for an energised workplace, fostering workplace creativity, the inner divine impulse and the inner consciousness as well as universal order.

Recent developments in workplace spirituality are more centred on measuring and developing the tools that can conceptualise workplace spirituality. For example, Abdullah et al., (2009) investigated the relationship between workplace spirituality and leadership effectiveness among secondary school principals in Malaysia. Their study involved a questionnaire using multiple scales including the Ashmos and Duchon (2000) scale as discussed above. A significant relationship was found between departmental performance and leadership practice.

Similarly, Petchsawang and Duchon (2009) developed a spirituality scale based on the Ashmos and Duchon (2000) scale. This large study was conducted in Thailand on more than 3,800 employees working in a specialised food and bakery delivery company. These two diverse yet similar studies were conducted in Malaysia and Thailand in 2009 and either used or developed their own spirituality measurement scales.

Corner (2009) developed four conceptual frameworks to demonstrate the relationship between workplace spirituality and business ethics through the experiential knowledge provided by yoga masters. In the same year Johnson (2009) conjectured that spirituality-driven leaders are environment friendly and foster sustainability. He states that workplace spirituality combined with personal spirituality equips leaders in different ways such as highlighting universal moral principles for the task of ethical leadership.

Fry et al., (2011) conducted an extensive empirical study using structural equation modelling (SEM) to test the dynamic relationship between spiritual leadership and spiritual wellbeing. The results revealed positive relationships between spiritual leadership and several unit-level outcomes, including organisational commitment and four measures of performance. The participants of this study were military cadets at the United States Military Academy. The study established that leadership based on values generates a vision of hope and faith which consequently influence positive attitudes. This study also used three scales to measure the concepts of spiritual leadership, organisational commitment and productivity. The study used the Spiritual Leadership and Spiritual Well Being Scales developed by Fry et al., (2005), the Organisational Commitment Scale developed by Allen and Meyer (1990), and the Productivity Scale by Nyhan (2000).

In the recent workplace spirituality literature, there is an undertaking to develop scales to measure the concepts in order to progress to the more advanced quantitative studies involving SEM. More recently, Tombaugh et al., (2011) measured workplace spirituality and developed a scale labelled 'Spiritual Expression at Work' (SEW). They conducted confirmatory factor analysis on a sample of 348 working adults from a broad cross

section of US organisations. Their study suggests that it is important to encourage this form of expression aiding to the progress of spirituality in organisations. They reported significant correlations between a composite score of workplace spirituality and various outcomes, including organisational commitment, intent to quit (negative correlation), intrinsic job satisfaction, job involvement and organisation-based self-esteem. Future studies may further examine the robustness, reliability and the limitation of these scales.

Daniel (2010) developed a theoretical model that demonstrates the effect of workplace spirituality on team effectiveness and performance. The study concluded that when team members experience spirituality, work attributes such as trust, respect and creativity are found within an organisation, thus, achieving team effectiveness.

It is interesting to note that a recent development in the workplace spirituality domain consists of mixed studies, i.e. conceptual building and empirical investigation. Probst and Strand (2010) developed the theoretical propositions to investigate the role of spirituality and its response to job insecurity and echoed the need to empirically examine further workplace spirituality constructs.

Few workplace spirituality studies have been conducted in Australia within the business and management disciplines. The mixed methods study conducted by Issa and Pick (2011) in the Australian service sector clearly demonstrated that both spirituality and aesthetics are two major components of ethical mindsets. They also found that there are more female employees in the Australian service sector; most are highly qualified having post-graduate qualifications. This thesis will also investigate the qualification, gender, age, purchasing expenditure and its relationship with spirituality and sustainable procurement,

thus extending the contribution of Issa and Pick (2011). Overall, the literature review discussion highlights that workplace spirituality literature in Australia is still in a development stage compared to that in corporate America.

Marques and Allevato (2011) proposed the concept of eco-citizenship in the higher education sector. They contributed to the literature by combining the ecological concept with science, spirituality and awareness. They posit that spirituality should not be confused with religion. This thesis also takes the similar view, and extends their work within 39 Australian universities.

Similarly, Vandenberghe (2011) developed theoretical propositions in a different vein based on the spiritual leadership model developed by Fry (2004) and its influence on employee commitment in the workplace, and ultimately job performance, organisational citizenship behaviours, retention, and psychological wellbeing. The study proposed three moderators of spiritual leadership: a climate for spirituality, personal spirituality, and materialism. This thesis explores new research and provides a strong case for the relationship between spirituality and sustainable procurement underpinned by the conceptual framework of the Spillover Theory discussed in the next section.

Giacalone and Jurkiewicz (2010) posit a theoretical framework that spirituality in organisations can have three roles: the parallel relationship (workplace and spirituality are separate and never coinciding), the adversarial relationship (spirituality creates adversarial instances such as antagonism and hostility), and the integrative relationship (a potential positive relationship between spirituality and the workplace). For this thesis, it is

postulated that spirituality and sustainable procurement will have an integrative relationship.

Malloch (2011) brought in the concept of spiritual capital by stating that management strategies based on values have a positive impact on the bottom line. This strengthens the association between organisations and customers, employees, vendors, environment and the world at large. Similarly McKee et al., (2008) contributed to the workplace spirituality literature by proposing that sense-making can be seen as a tool and has the heuristic potential to further understand the elements of workplace spirituality. McKee et al., (2008) further states that it has limitations as well, including the dominance of one individual over another. Thus, recent workplace spirituality is emerging with new concepts and constructs. With these recent developments, Exline and Bright (2011) contributed to the workplace literature by addressing the challenges faced by the leaders in an organisation in acknowledging the issues of spirituality and religious struggles.

Losoncz (2011, p. 85) states that ‘spiritualised management opens up opportunities for personal development and individual self-realisation in organisations, rather than reducing the members of organisations to machines for the profit’. He also discussed the ecological aspect of spirituality and endorsed the view that spirituality has the potential to contribute to its surroundings and environment. Thus, the application of spirituality in the workplace is widely recognised in the modern literature.

Bhunia and Das (2012) investigated in Taiwan the influences on motivations for earnings for management from the perspectives of workplace spirituality using the KMO model (Kaiser-Meyer-Olkin) and the hierarchical linear model; they also conducted factor

analysis and reliability analysis. Their study found that workplace spirituality is a new and independent perception of individuals, and believers of different religions do not exhibit any significant variances in their perceptions of workplace spirituality.

Javanmard (2012) focused on spiritual leadership and spirituality at work for performance improvement based on a conceptual framework using 'Spirituality at Work Measurement' and 'Spiritual Leadership' (Fry et al., 2005) scales. His study found that organisational vision does not motivate employees to communicate more with each other and the inner existence of employees is not affected by a good or bad organisational vision. Recently Petchsawang and Duchon (2012) examined the effects of spiritual intervention particular meditation training to enhance productive work practices in the food and bakery company in Thailand.

Thus, modern workplace literature has progressed to include quantitative research methods in investigating spirituality in the workplace. Researchers are encouraged to conduct quantitative research within what has been characterised recently as a 'burgeoning new field' (Benefiel, 2007). However, empirical studies have also been inconsistent in reporting Cronbach's alpha and some have suffered from a lack of pilot study research design. Both are important factors in ensuring the reliability and validity of data and findings. This thesis builds on the pre-test and pilot study to provide substantial reliable evidence which investigates the relationship between spirituality and sustainable procurement, responding to the need to investigate the workplace spirituality constructs.

The workplace spirituality literature has developed several constructs and is enriched by various concepts, theory building and quantitative investigation. Gupta et al., (2012)

believes that workplace spirituality is operationally feasible and efficacious and most importantly will reward the workplace by contributing to the sustainable factors and societal support. Losoncz (2011) states that management studies deal with the human behaviour and the social nature of man, which is a component of spirituality. Thus, the literature review demonstrates the qualitative as well as quantitative developments within workplace spirituality although it does not include an examination or enquiry into the relationship between spirituality and sustainable procurement within the Australian higher education sector.

The next section provides a review and analysis of the sustainable procurement literature.

2.6: Sustainable Procurement

The literature review for sustainable procurement began with the systematic search of several interdisciplinary terms similar in meaning to sustainable procurement, including 'green procurement', 'public procurement', 'sustainable management', 'sustainable consumption', 'green purchasing', 'procurement practices and regulation', and 'frameworks for sustainable procurement'. The introductory search resulted in two basic inferences. First, the development of sustainable procurement studies is concentrated in Europe and primarily within the government sector. Second, procurement studies particularly in Australasia are still in their infancy. Therefore, as with other areas, the literature is sparse, underdeveloped and inconsistent.

Environmental philosophers such as Callicott and Ames (1989) have argued that it is morally satisfying for human beings to relate to nature. Their futuristic study discussed an environmental crisis including environmental population, aesthetic degradation of nature, human overpopulation and resource depletion. Consequently, they advocated the urgency

of philosophical intervention including spirituality, for solutions. This thesis extends the work of Callicott and Ames (1989) and investigates the spirituality of procurement professionals and its relationship with sustainable procurement. A discussion of the definition of sustainable procurement and an analysis of the literature including developments in sustainable procurement follows.

2.6.1: Sustainable Procurement Definitions

As previously discussed, workplace spirituality is a multidisciplinary concept. Similarly, sustainable procurement is researched in various sectors such as the public sector, the private sector, and the construction, education, and manufacturing sectors. Therefore, the literature review for sustainable procurement was conducted across various disciplines to establish an overview of its development and dimensions.

The sustainable procurement concept is broad and the literature provides several definitions involving various interrelated concepts. Hence, it is not productive or possible to extract the spectrum of sustainable procurement into a single definition. There are also several interwoven concepts that stand for sustainable procurement, such as ‘social responsibility’, ‘green management’, ‘green marketing’, ‘green buying and purchasing’, ‘sustainable development’, ‘avoiding harmful products and discontinue purchase of such products’, ‘promoting eco-friendly items’, ‘sustainable progress’ and ‘value for money’. The various interpretations of sustainable procurement by researchers, governmental reports, organisations, and committee provide a broad picture of the sustainable procurement concept. The following table provides a list of sustainable procurement definitions in chronological order:

Table 2.2: Sustainable Procurement Definitions

| Country | Author | Definition |
|------------------------|--|---|
| UK | National Procurement Strategy, 2003 | ‘Procurement is the process of acquiring goods, works and services, covering both acquisitions from third parties and from in-house providers. The process spans the whole cycle from identification of needs through to the end of a services contract or the end of the useful life of an asset’ (para.4). |
| UK | Welsh Assembly Government, 2004 | ‘Sustainable procurement can be defined as: ‘Giving due consideration to the impact of the procurement on the environment, on the community and on the social conditions of those delivering or receiving the product of the service’ (para.7). |
| Switzerland | Environmental Management Group (EMG), 2004 | ‘Procurement is called sustainable when the organisation uses its own buying power to give a signal to the market in favour of sustainability and bases its choice of goods and services on economic considerations, environmental and social aspects’ (article.2). |
| Australia | SP Task Force, 2006 | ‘Sustainable procurement is a process whereby organisations meet their needs for goods, works and utilities in a way that achieves value for money on a whole life basis in concepts of generating benefits not only to the organisation, but also to society and the economy. It considers products and suppliers’ (para.3). |
| Australia | Procurement Circular, 2007 | ‘Sustainable procurement aims to obtain products, services, building designs and construction that minimise waste, conserve resources, and protect society’s health and the environment throughout the life cycle of the procurement’ (para.2). |
| Report published by UN | <i>Sustainable Procurement Manual</i> , 2008 | ‘Sustainable procurement is not about ‘burdening’ the market with extra requirements; rather it is a well-defined strategy that gradually phases in sustainable requirements in bids, supports measures, promotes dialogue and opens communication between the suppliers and procurers’ (para.4). |
| Report published by UN | UNEP, 2008 | ‘Sustainable procurement means buying products and services that have a high environmental relief potential and that have been produced in a socially-responsible way, e.g. respecting ILO core conventions’ (para.3). |
| Australia | Sustainable procurement Policy, 2008 | ‘Sustainable procurement refers to the purchase of goods or services that have a lesser or reduced effect on human health and the environment (over the entire life cycle of the product, i.e production, destruction, usage and disposal) when compared with competing products or services that serve the same purpose’ (p.4). |
| UK | Walker and Brammer, 2009 | ‘Sustainable procurement is a procurement that is consistent with the principles of sustainable development, such as ensuring a strong healthy and just society, living within environmental limits, and promoting good governance’(p.128). |
| UK | Walker et al. 2009 | ‘Sustainable procurement is the pursuit of sustainable development objectives through the purchasing and supply process incorporating social, environmental and economic aspects’ (p.15). |
| Report published by UN | <i>Sustainable United Nations</i> , 2009 | ‘Sustainable procurement could be described as an acquisition process whereby organisations meet their requirements for goods, services, works and utilities in a way that achieves value for money on a whole-of-life basis in terms of generating benefits not only to the organisation, but also to society and the economy, while minimising its impact on the environment’ (para.4). |
| UK | Walker and Brammer, 2012 | ‘Sustainable procurement in its various guises is a policy objective in public procurement and is the pursuit of sustainability objectives in the purchasing and supply process’ (p.260). |

Source: Author

Table 2.2 above demonstrates that sustainable procurement definitions entail several concepts such as social, environmental and economic factors; manufacture and logistics; renewable and recycle options; reuse and disposal; and buying, selling and promoting options. Although the core of each definition is similar, it is crucial to understand the holistic meaning of sustainable procurement, which embraces the whole of society, the environment and the economy.

The above definitions use broad and wide-ranging terms to define sustainable procurement such as ‘future generations’, ‘balance’, ‘environment’, ‘social benefit’, ‘ethical behaviour’, ‘social responsibility’, ‘cost benefit’, ‘strong healthy society’ and ‘good governance’. Hence, its multidimensional meanings lead to the conclusion that it cannot be limited to a single definition, although the table listing these does provide an in-depth understanding of the sustainable procurement concept. Walker and Brammer (2009, p.128) infer that ‘sustainable procurement should be consistent with the principles of sustainable development such as ensuring a strong healthy and just society, living within environmental limits, and promoting good governance’.

In Australia, sustainable procurement studies of the higher education sector have not been reported in the literature. This thesis extends the sustainable procurement research in this area, building a platform for future studies. It is also in the best interest of future studies that several constructs are used in order to achieve sustainable procurement.

Sustainable procurement is a new endeavour that Baker (2006, p. 5) states will ‘reduce the resources intensity of production (sustainable production) and undertake new patterns of consumption that reduce the levels of consumption’. In brief, sustainable consumption

requires not only a profound re-evaluation of many industry practices, it also represents a fundamental change in the values of industrial societies and in the approach of buyers (O'Brien, 1999).

The literature also indicates that procurement professionals hold a crucial place in environmental activities because they consider the disposition of the materials (Carter et al., 1998) and purchasing acts as a boundary-spanning capacity under the supply chain (Day & Wensley, 1983). The respondents in this thesis are procurement professionals working in the Australian higher education sector. As noted, the sustainable procurement literature does not contain any investigation of the procurement behaviour of these professionals.

2.6.2: Literature Review: Sustainable Procurement

This section addresses the scholarly developments and government frameworks within the sustainable procurement literature. Particularly in Australia, scholarly research under the term 'sustainable procurement' is scarce. However, it is gaining momentum, particularly in European countries (Fossgard-Moser 2003; McCrudden (2004); Michelsen et al., 2006). Few studies focus primarily on sustainable procurement within the Australian context and the literature is highly inconsistent, patchy and predominantly descriptive or prescriptive, lacking empirical vigour (McMurray et al., 2009). A possible reason for this is that most of the sustainable development and procurement regulations are undertaken by the European Union and this has led to the consequent research in Europe.

The literature reveals an inconsistency in the use of the phrase ‘sustainable procurement’ (Walker & Phillips, 2006). Simultaneously, there is also a profusion of similar terms, such as ‘green supply’ (Bowen et al., 2001a, 2001b), ‘green purchasing’ (Chen, 2005; Min & Galle, 2001; Ochoa et al., 2003), ‘green purchasing strategies’ (Min & Galle, 1997), ‘green purchasing and supply policies’ (Green et al., 1998), ‘environmental purchasing’ (Carter & Carter, 1998; Carter et al., 1998, 2000; Legarth, 2001; Murray & Cupples, 2001), ‘environmental supply chain management’ (Lamming & Hampson, 1996; Narasimhan & Carter, 1998), ‘green supply chains’ (Klassen & Johnson, 2004; Rao & Holt, 2005; Walton et al., 1998), ‘green value chains’ (Handfield et al., 1997), ‘green supply chain management’ (Sarkis, 2003; Zhu et al., 2005) and ‘environmental supplier performance’ (Humphreys et al., 2003; Noci, 1997). This broad array of terminology shows the breadth of sustainable procurement and the manner in which it is accumulating and adding new themes.

Brammer and Walker (2011) comment on the wide-ranging nature of procurement research and perceive two major themes arising from it. The first theme is the influence that public procurement has on the pattern of economic trends, particularly the favouring of local organisations over foreign suppliers (Brulhart & Trionfetti, 2004; Laffont & Tirole, 1991; Tigner, 1991; Vagstad, 1995). The second major theme examines the role that government can play as a catalyst for innovative activity within a geographic domain (Aschhoff & Sofka, 2008; Edler & Georghiou, 2007).

It is imperative to take the sustainable development concept into account because the root of sustainable procurement lies in sustainable development. Sustainable procurement is one of the crucial branches of sustainable development and the study of one is incomplete

without addressing the other. This bond is clearly reflected as sustainable procurement is one of the sustainable development objectives (WCED, 1987). Independent research under the theme of sustainable procurement progressed with research occurring in neighbouring areas such as sustainability. The research addressing sustainable procurement came into prominence after the World Summit on Sustainable Development in 2002 called to 'promote public procurement policies that encourage development and diffusion of environmentally sound goods and services' (UNEP, 2005, p. 2).

Developments in the sustainable procurements research area arose from studies addressing sustainable development, which is an umbrella concept embracing sustainable procurement. Prenen (2008) states that sustainable development has become very common in use and simultaneously it has lost its real meaning and depth as there are many interwoven concepts that are incorporated into its meaning. Hence, an ambiguity exists in the nature of sustainable development.

Under sustainable procurement, Prenen (2008) also notes that green procurement is mainly associated with environmental aspects whereas sustainable procurement involves social features as well. Hence, the term sustainable procurement also has a multifaceted domain.

In 1992, The United Nations (UN) meeting in Rio de Janeiro recognised the integral and interdependent nature of the earth. The outcome of this meeting was the 'Declaration on Environment and Development' and Agenda 21 which promoted the holistic perspective of various levels of the economy. For example, Principle 1 states: 'Human beings are at the centre of concerns for sustainable development. They are entitled to a healthy and

productive life in harmony with nature’. The population frame in this thesis is procurement professional who contribute in the procurement tasks in their particular Australian university. In this way, the thesis addresses a gap in the procurement literature, particularly within the Australian higher education sector where its relationship with spirituality has not been studied.

Following this UN meeting, another sustainable development strategy was developed in 1997 called ‘A Better Quality of Life’. This added pressure on governments to broaden their responsibilities to include the wellbeing of the local community, obliging them to consider the environmental, social and overall economic costs in the procurement decisions-making process (Thomson & Jackson, 2007). In 2004, further developments took place when the UN required a much wider number of countries to advance sustainable consumption and production through the ‘The Marrakech Process’. Hence, these UN requirements acknowledge that sustainable procurement practices are one of the objectives of sustainable development, as Walker and Phillips (2006) confirmed.

Several groups were formed to facilitate procurement functions such as the ‘Whitehall Sustainable Procurement Group’ founded in 2001, which is a national procurement partner for the UK public services and conducts surveys of central governments. It provides useful and practical help with procurement recommendations, developing information bases and structures for dealing with complex cross-departmental issues (SDiG, 2003).

An Independent Review of Public Sector Report was published by Sir Peter Greshon (Greshon 2004) with the intention of encouraging efficiency in government sectors by

restructuring, taking advantage of economics of scale and IT, cutting down on waste, and increasing productive time.

In 2004, an agency of the Dutch Ministry for Economic Affairs ‘SenterNovem’ published a report entitled *Sustainable Procurement Measurement* from 192 Dutch government organisations. The report indicated that in 23 % of the cases, the organisation concerned included sustainability criteria in the procurement process (Prenen, 2008). This illustrates the increasing momentum of sustainable procurement through the formation of new groups and reports.

Cousins et al.’s (2006) empirical study investigated the purchasing function patterns from 151 UK purchasing executives and its relationship with organisational performance on purchasing managers or equivalent working in 800 UK manufacturing firms. To date, sustainable purchasing patterns such as annual expenditure by procurement professionals within Australian universities have not been reported in the literature.

Historically, the initial developments and impetus for sustainable procurement were government guidelines, reports, charters and summits, which were then followed by scholarly academic research. The study conducted by Brammer and Walker (2007) can be seen as a benchmark in sustainable procurement research because it involved survey sampling of over 280 public procurement practitioners from 20 countries with collective responsibility for \$45 billion a year in expenditure. This landmark study of public procurement highlighted the multi-country procurement phenomenon. Their comprehensive study provided an overview of how international public bodies implement sustainable procurement and discussed the barriers to its implementation.

Looking further into the development of sustainable procurement from region to region, the literature suggests that the United Nation's urgent call caused its adoption in various countries. For example, the sustainable procurement policy framework in the US is consistent with its constitution. Procurement issues have been crystallised in the formulation of government procurement policies for businesses owned by women and minorities, including an emphasis on purchasing from Indigenous people (McCrudden 2004). Similarly, the Canadian government stresses eco-friendly aspects of purchasing and ensuring procurement opportunities for Indigenous businesses. It also founded the Office of Greening Government Operations (OGGO) in 2005 which develops green procurement policy and provides eco-friendly purchasing tools to encourage sustainability (Brammer & Walker, 2007).

In the Asia Pacific Region, Thomson and Jackson (2007,p.432) state that Japan is the leading country in green public procurement and has 'developed eco-labelling, purchasing guidelines, products lists, economic instruments, a mandatory reporting system, life guidelines analysis information and a public awareness program'. A law on green purchasing was passed in 2001 which obligated all government agencies to develop and implement green purchasing policy. Sendai city – which aimed to have 90 % of all purchases to be sustainable for 10 product goods – formulated an environmental policy to establish itself as a beacon for the wider community (ECCG, 2007).

In Europe, Sweden has adopted a holistic approach to pursue health targets as a justification for reducing fossil fuel use. The central government in Denmark campaigned to change consumption patterns such as energy and water use, supported the developments of renewable sources of energy, and required public bodies to develop green procurement policies (Ochoa et al., 2003; UN, 2002). In Northern Ireland, a study

was conducted to explore the impacts of a project designed to leverage public procurement and to facilitate the region's performance related to long-term unemployment (Erridge & Henningan, 2007). The report, *The World Buys Green*, (Erdmenger et al., 2001), an international survey on national green procurement practices, was conducted in Austria, Denmark, the Netherlands and Sweden. It was complemented with studies made in Hungary, Japan and the US. The aim of this survey was to access the experiences in these countries known for green purchasing activities. The survey found that there is no common universal approach to green purchasing in Europe. According to the same survey, environmental education within public procurement entities is seen as the key driver towards a more sustainable pattern of purchasing. Also, the impacts of sustainable procurement on the environment and on the market vary significantly from country to country.

The Michelsen and Boer (2009) study conducted in Norway on purchasing managers/purchasing coordinators, finance managers or purchasers found an association between the green procurement focus and the size of municipalities (measured in total annual purchasing spend and the number of inhabitants). The Michelsen and Boer (2009) study confirms that there is a focus on green procurement in municipalities and counties in Norway, but the requirements of the *Public Procurement Act* are far from implemented. Thus, the scholarly research on the European continent is gaining momentum whereas, in Australia, procurement studies are still emerging.

There are procurement framework developments in Australia. At the government level, the Australasian Procurement and Construction Council Inc. (APCC), formerly called the National Public Works Council, is the peak council of departments responsible for

procurement, construction and asset management policies for the Australian, state and territory governments and the New Zealand Government (apcc.gov.au).

The Australian and New Zealand Government Framework for Sustainable Procurement was launched by the Australian Procurement and Construction Ministerial Council on 14 September 2007. This is a world-first government procurement framework that incorporates all three elements – social, environmental and economic – of sustainability into the one document. It also sets national principles on implementing sustainable public procurement to minimise environmental impacts, benefit society and reduce costs. The framework encourages collaboration between governments to initiate consistent programs to promote the principles of sustainable procurement. This framework is based on the premise that sustainable procurement balances economic, environmental and social considerations in the procurement process and states that sustainable procurement is about resource extraction and consumption, manufacturing and production, transport and logistics, product and asset design, use and maintenance, recycling and disposal options, employee rights and conditions, corruption, unfair competition and ethical behaviour. The *Australian and New Zealand Government Framework* states that sustainable procurement means that, when buying goods and services, organisations practicing sustainable procurement will consider:

- Strategies to avoid unnecessary consumption and manage demand
- Minimising environmental impacts of the goods and services over the whole-of-life of the goods and services
- Suppliers' socially responsible practices including compliance with legislative obligations to employees
- Value for money over the whole-of-life of the goods and services, rather than just the initial cost (www.apcc.gov.au).

Similarly, this thesis investigates procurement dimensions such as human rights, philanthropic activities and ethical practices, and its relationship with spirituality.

Thus, sustainable procurement is about the requirement that is compatible and favourable to the environment, supports economic and social progress seeks efficiency of natural resources and ensures the quality of the products that ultimately give the best value for money.

The regional development of sustainable procurement gathered momentum in European countries, with the US and Australia following. To date, the literature is sparse and in some cases unavailable for developing and underdeveloped countries. For example, Sadikan (2008) states that there is a weakness in the Indonesian public procurement practices – product eco-labelling is still in the initial stages of development. In China, there is a lack of necessary procurement guidelines, information, performance indicators and loopholes within the environmental legal system (Geng & Doberstein, 2008).

International research in sustainable procurement studies has remained diverse but predominantly it is studied within the European government sector. Government has many compelling reasons to engage in sustainable procurement agenda because government itself is one of the biggest purchasers and at the same time it is in the position to regulate the use of resources and promote fair competition. Most studies discussed the role and importance of government in promoting sustainable procurement practices by participating in the market and at the same time regulating it with its purchasing power to advance conceptions of social justice (McCrudden, 2004). The literature also suggests that theory and practice in sustainable procurement are nascent in the public sector

(Thomson & Jackson, 2007). It is gaining momentum and is on the agenda which will lead to the training of practitioners to implement it (DEFRA, 2006; Helm et al., 2005).

Prenen (2008) identifies the study conducted by Brammer and Walker (2007), *Sustainable Procurement Practice in the Public Sector*, as the first published international comparative study that presents an organised and comprehensive insight into global sustainable procurement practice. Their questionnaire-based study involved more than 1,500 public procurement professionals from 25 countries. In the previous decade, Carter et al., (1998) investigated company-specific factors such as top, middle management support, departmental goals, training and evaluation for their respective impacts on environmental purchasing. The study compared US purchasing managers with German purchasing managers and found that middle-level purchasing managers have the capacity to facilitate environmental purchasing activities. The study also revealed that German laws are stricter and, as a result, German firms were significantly more involved in environmental purchasing than the US firms.

Linton et al., (2007) states that research in the field of sustainable procurement is still in its infancy and requires further empirical investigation on how sustainability can be integrated into procurement strategies. To date, there is no study reported in the literature that investigates the procurement pattern within the Australian higher education sector.

The literature also lacks research into the purchasing and supply professionals in this sector. This thesis addresses this oversight using an empirical study to investigate patterns in socially responsible purchasing, the morals of individual employees, supplier's

locations, and whether purchasing and supply assist the local community. These represent various dimensions of sustainable procurement.

For some, sustainable procurement can be also be achieved by environmental purchasing. It is a related and more established research area that looks at the green supply issues (Walker et al., 2009). It is now evident that the sustainable procurement research area is in its early years of development and that the academic literature addressing sustainable procurement is scarce (Preuss, 2007; Walker & Brammer, 2009).

There are similar research areas overlapping in values to sustainable procurement such as green marketing, green buying, environmental purchasing, green logistics, green product design and proactive environmental management. At this stage, the literature does not report the issue of whether their research objectives are different from one another or whether they have the same ends; in the broad sense, the goals of these diverse research areas are uniform. They facilitate and complement each other. For example, proactive environmental policies include conserving energy, reducing waste, developing green products and packages, recycling and remaining environmentally sensitive (Cairncross, 1992).

Larson and Morris (2008) studied the gender of procurement professionals and its impact on salary and compensation in Canada. They found that male purchasing and supply managers reported earning significantly higher salaries than their female counterparts. Likewise, Walker and Jones (2012) contributed to the procurement literature by linking it with the environmental purchasing in the United Kingdom. This study also identified

‘new constraints, including limited resources, weak processes, communication and knowledge deficiencies, insufficient supplier commitment, and cultural barriers’ (p.18).

Zsidisin and Siferd (2001) state that research should tend towards a holistic view instead of specific functions such as purchasing. The Sustainable Purchasing and Supply Summit Conference (2012) presented a holistic view of sustainable procurement and the role of the supply chain in more responsible businesses and government. The research questions in this thesis sought to investigate the relationship between the dimensions of spirituality and sustainable procurement and how demographic characteristics such as age, qualifications and purchasing power shape that relationship.

In a recent study, Simcoe and Toffel (2011) empirically explored the interaction between local government procurement rules and the private sector adoption of green building practices. They provided evidence that public procurement policies can influence private sector purchasing decisions in a way that reinforced underlying policy goals. Similarly, Meehan and Bryde (2011) conducted an empirical study in the UK social housing industry which is a government high priority. Their study found that there is no strong presence of sustainable procurement practices in the social housing industry in the UK. However, this comprehensive study came to some valuable conclusions such as that the key factor for sustainable procurement is the management of inter-organisational relationships and collaborative activities.

Global developments in the sustainable procurement research area within the government sector have been explored by McCrudden (2004), Rimmington et al., (2006), Thomson and Jackson (2007), Geng and Doberstein (2008), Preuss (2009), Walker and Brammer

(2009) and Meehan and Bryde (2011). One reason for the proliferation of government sector studies may be the influence of the World Summit on Sustainable Development in 2002 which called governments to promote public procurement policies that encourage development and diffusion of environmentally sound goods and services (WSSD. 2002). Simcoe and Toffel (2011, p. 1) state that ‘government purchases account for 10–15 % of GDP in most developed countries, green procurement policies could have substantial direct effects on the environment’. It is critical to note that this thesis forays into the procurement research within the Australian higher education sector.

Walker and Brammer (2009) state that private sector studies have focused on environmental issues in procurement while the social aspects of sustainable procurement is under researched. They also state that existing research focuses on the developmental tools to assist green procurement policy implementation and note how, in this way, sustainability may be encouraged when the public sector buys from suppliers in specific industries. Sustainable procurement has also been examined in the construction industry (Varnas et al., 2009), the service industry (Byggeth & Hochschorner, 2006), the education sector (Li & Geiser, 2004), and the energy sector (Fossgard-Moser, 2003). Research has also been conducted to investigate whether a firm’s environmental performance is enhanced by green supplies (Green et al., 1998), green supply chain management (Zhu et al., 2005) and green production or manufacturing (Curkovic, 2003; King & Lennox, 2001). Similarly, McCrudden (2004) investigated the linkage between public procurement and social outcomes.

Furthermore, the literature also suggests increasing interest in corporate social responsibility and purchasing social responsibility (Carter, 2005; Carter & Jennings,

2002). Stephenson (2004) finds that female board directors favour social and community responsibility and innovation. Williams (2003) reports that the presence of female board members is positively related to firm's corporate philanthropic practice.

Walker et al., (2009) conducted a study in the UK that explores the delivery, design and evaluation of sustainable procurement in the UK's health sector. Their study assessed and evaluated the implementation of sustainable procurement education. Although sparse, recent literature exists that links higher education and sustainability (Elsen, 1998; Gough & Scott, 2007; Hanrahan et al., 1998; Moore, 2005; van Weenen, 2000).

Gough and Scott (2007, 2008) contributed extensively to the sustainable development and procurement literature by studying these concepts in conjunction with higher education. Their work includes sustainable development in higher education from 2003–2011, such as investigating sustainable development at university level, environmental education research, sustainable development and its barriers and implementation in universities, and developing and promoting sustainable development in universities. His work suggests that sustainable procurement is one of the goals of sustainable development. Similarly, Moore (2005) states that sustainability is trans-disciplinary and cannot be left to one discipline and Crossman (2003) also stated that spiritual development in education needs to be welcomed and requires a holistic perspective. Similarly, Cortese (2003) states education will play a highly critical role in laying the foundation for future sustainability. This thesis extends the work of Gough and Scott (2007, 2008), Moore (2005), Crossman (2003) and Cortese (2003) by investigating sustainable procurement in the Australian higher education sector and investigating its relationship with spirituality.

When addressing the higher education literature on procurement and sustainability, ULSF (1999) states that there are many ways in which universities can achieve sustainability, such as ‘management, planning, development, education, research, operations, community service, purchasing, transportation, design, construction, renovation and retrofit’(para.4). It is evident from the options given by the ULSF that sustainable procurement can also be achieved through the principle of sustainability

Van Weenen (2000) states that approaches can vary from university to university, such as signing and formulating principles, making environmental friendly declarations, establishing new institutions, or focusing on a quest for sustainability. The University of Hertfordshire (1995) started an early movement and developed sustainable development policy that considers environmental issues, best value for money, equal opportunities and health and safety. It is committed to integrate sustainable principles in the university’s housekeeping practices. ‘Best Value for Money’ is defined as ‘the optimum combination of whole life cost and quality (or fitness for purpose) to meet the customer’s requirements’ (HM Treasury, 2007, p 9). The University of Waterloo has five key principles which are ‘Awareness, Efficiency, Quality, Co-operation and NATURAL Systems’ (van Weenen, 2000).

In a similar vein, Australian universities have established procurement guidelines that include best value for money, public scrutiny, enhancing local business and industry, risk management analysis probity, and environmentally responsible purchasing.

Some top business schools propagated sustainable development and related courses and these opened the gate for the rest of the universities around the globe. Sustainability

courses involving environmental concerns and the role of organisations in society have been incorporated by universities in undergraduate, postgraduate and executive development courses (Emiliani, 2004; Holt, 2003; Moore, 2005; Pesonen, 2003; Wright, 2002). Few studies have focused on sustainable procurement policy and the development of tools to facilitate its implementation (Thomson & Jackson, 2007).

The literature shows that one of the barriers in implementing sustainable procurement within organisations is the cost. As well as being one of the crucial barriers in the implementation of sustainable procurement, it is also perceived to clash with the main goal of procurement. However, as one of the goals of sustainable procurement is long-term cost reduction in relation to the environmental impact, it can also be seen as having a substantial future cost advantage over less future-aware approaches (Walker et al., 2009). Cost is reported as a barrier to the integration of environmental issues into standard supply practices (Min & Galle, 2001; Sharma & Nguen, 1999).

In this respect, it is important to study the procurement pattern of Australian universities. The survey instrument in this thesis investigates the purchasing function such as the product life cycle, the reuse of products and packaging, and the waste reduction goals of procurement professionals working within the Australian higher education sector.

Following the above developments within Australia, Australian government entered into an agreement called the 'Australia and New Zealand Government Procurement Agreement' (ANZGPA). This agreement covers all goods and services produced by the parties concerned which are the governments of the Commonwealth of Australia, New Zealand, New South Wales, Victoria, Queensland, Western Australia, South Australia,

Tasmania, Northern Territory and the Australian Capital Territory. All of these parties are 'committed to achieve procurement objectives which creates and maintains a single ANZ government procurement market in order to maximise opportunities for competitive ANZ suppliers and reduce costs of doing business for both government and industry' (apcc.gov.au, para 4). Responsibility for this agreement lies with Ministers responsible for procurement throughout Australia and New Zealand. It is administered by the Australian Procurement and Construction Council (APCC), which include senior officials representing Australian state, territory and Commonwealth governments. New Zealand has full participation rights on the APCC. Changes to the agreement are negotiated by the Ministers responsible for procurement through the APCC. Absent from the literature review are studies that link procurement and spirituality in the Australian higher education sector; and procurement studies in this sector are significantly low.

A university is an organisational unit that utilises materials and energy, facilities and space. It relies on upstream and downstream suppliers and, environmentally, it is crucial to take sustainable actions at university level that lead to sustainable procurement, such as using alternatives, and reducing and improving usage, materials or recycling (van Weenen, 2000). The purchasing capacity of procurement professionals or their equivalent working in the Australian higher education sector will have a direct impact on the natural environment. Examples given by Zsidisin and Siferd (2001) emphasise that purchasing personnel have a strong capacity to influence price, material procured, quality and delivery.

A recent study conducted by Thurston and Eckelman (2011) on the procurement of Yale University goods and services identified the financial expenditures resulting in the

indirect Green House Gas emissions (approximately 817,000 metric tons CO₂) and found that Yale University procures nearly \$1.5 billion of goods and services each year ranging from office supplies to radioisotopes to rare manuscripts. Recently, Australian universities have also disclosed their Greenhouse gas emissions after the introduction of *The National Greenhouse and Energy Reporting Act* (NGER) in 2007. This act is a single national framework for the reporting and dissemination of information about greenhouse gas emissions, greenhouse gas projects and energy use. To gather carbon emission data for Australian universities is beyond the scope of this thesis; however, the researcher is aware regarding emerging developments in this area.

As demonstrated above, procurement research within the higher education sector in Australia is emerging, although the relationship between spirituality and sustainable procurement has not been addressed. Additionally, the literature does not examine the spirituality of procurement professionals within the higher education sector. This thesis will provide a first comprehensive view of the relationship between spirituality and sustainable procurement within the Australian higher education sector. And, for the first time, procurement professionals in 39 Australian universities were contacted for this study.

Procurement professionals were divided into three sub-categories: 1) high-level or top management which included directors, policy-makers, and executive directors; 2) middle management, which comprises procurement staff who are managers, contractors, procurement specialists and team leaders; and 3) first level which included procurement assistants. Thus, this thesis covers the broad spectrum of procurement professionals working within the Australian higher education sector.

2.7: Integration of the Spirituality and Sustainable Procurement Relationships

The purpose of this section is to provide evidence from the workplace spirituality and sustainable procurement literature that provides insights into the relationship between spirituality and sustainable procurement.

This thesis examines whether such a relationship exists and if so, then to what degree? Conventional business and management literature finds the relationship between spirituality and sustainable procurement contradictory and unrelated. However, a comprehensive review of the literature reveals that there are several common objectives shared by both spirituality and sustainable procurement, such as the environment, wellbeing and ethics, which justify the existence of a relationship.

Table 2.3 lists common features between spirituality and sustainable procurement that show the shared elements that exist in both spirituality and sustainable procurement. The table consists of ten common elements shared by spirituality and sustainable procurement that have been found in the business and management literature. The ten common elements are responsibility, wellbeing, obligation, ethical business practices, guidance and innovation, work attributes, interconnectedness with environment, sustainability, awareness and community.

Table 2.3: Common Elements of Spirituality and Sustainable Procurement

| Table 2.3: Common Elements of Spirituality and Sustainable Procurement | | |
|--|--|--|
| Common elements | Workplace Spirituality | Sustainable Procurement |
| RESPONSIBILITY | <ul style="list-style-type: none"> Spirituality is inspired responsibility towards others (Pruzan & Pruzan, 2007; Pfeffer & Vega, 1999) | <ul style="list-style-type: none"> SP believes in responsibility, which generates benefits not only to an individual organisation but also to society, the economy and the environment (www.apcc.gov.au). SP promotes organisational responsibility and eco-friendly working technologies (www.apcc.gov.au). A key sustainable procurement principle of the South Australian government is to 'support suppliers to government who are socially responsible and who adopt ethical practices' (<i>Sustainable Procurement Guidelines</i>, 2012, para 2). |
| WELLBEING | <ul style="list-style-type: none"> Spirituality enhances wellbeing (Cotton et al., 2009) Spirituality results in wellbeing and a virtuous life (Wills, 2007) | <ul style="list-style-type: none"> SP constitutes employees' rights and fair working conditions (www.apcc.gov.au). The socio-economic criteria of SP has a basis of 'Well-being Powers' (Preuss, 2009). A European procurement rule states that the contracting authority should 'meet the needs in the general interest (Joseph Rowntree Foundation, 2002). SP promotes environmental wellbeing for organisations such as practicing compliance and legislative obligations (www.apcc.gov.au). |
| OBLIGATION | <ul style="list-style-type: none"> Spirituality enhances a sense of obligation and loyalty towards others (Rego & Cunha, 2008) | <ul style="list-style-type: none"> 'A specific aspect of ethical behaviour relevant to procurement is an overarching obligation to treat potential suppliers as equitably as possible' (<i>Commonwealth Procurement Guidelines</i>, 2008, sec. 6). |
| ETHICAL BUSINESS PRACTICES | <ul style="list-style-type: none"> Individual spirituality enhances ethical business practise (Giacalone & Jurkewicz, 2003) There is a connection between spirituality and ethics in the workplace (Giacalone & Jurkewicz, 2003) | <ul style="list-style-type: none"> SP includes issues such as fair competition, ethical behaviour and adopting policies that are universally sustainable (www.apcc.gov.au). Procurement is about being ethical where 'purchasers and potential suppliers deal with each other with mutual trust and respect' (<i>Commonwealth Procurement Guidelines</i>, 2008, sec. 16) SP is about embedding ethical core values among contractors, policies and procedures (Kennard, 2006) Business organisations must participate in |

| | | |
|--|---|--|
| | | society in an ethically symbolic way (Chancellor, 2002; Joyner & Payne, 2002) |
| GUIDANCE AND INNOVATION | <ul style="list-style-type: none"> • Spirituality embraces guidance (Bacchus & Holly, 2004) and increases innovation (Neck & Milliman, 1994). • The spiritual capital of leaders enriches the deeper aspect of life including responsible behaviour and global concern (Zohar & Marshall, 2004) | <ul style="list-style-type: none"> • SP believes in reducing potential negative impacts associated with the purchase and use of products (www.apcc.gov.au). • There is a link between sustainability and innovation (Philips, 2000) • Sustainable procurement will build a sustainable supply chain for the future (Kennard, 2006) • Sustainable procurement identifies suppliers that provide detailed information in relation to guidance on safe use and disposal (Browne et al., 2004) |
| WORK ATTRIBUTES | <ul style="list-style-type: none"> • Spirituality enhances work attributes (Fawcett et al., 2008) | <ul style="list-style-type: none"> • SP encourages continuous improvement and innovation which promotes proper consumption and manages demand (www.apcc.gov.au). • SP is about ensuring that suppliers comply with child labour laws, minimum wages and safety (Carter & Jennings, 2004) |
| INTERCONNECTEDNESS WITH ENVIRONMENT | <ul style="list-style-type: none"> • Spirituality is about interconnectedness not just with other people but also with the environment, including minimum damage to it (Mitroff, 2003; Mitroff & Denton, 1999). | <ul style="list-style-type: none"> • SP policies involve protection of the environment (Kennard, 2006) • SP minimises negative impacts on the environment (Walker & Philips, 2006) |
| SUSTAINABILITY | <ul style="list-style-type: none"> • There is a positive relationship between spirituality and sustainability (Narayanan, 2008) | <ul style="list-style-type: none"> • Sustainable procurement is the pursuit of sustainable development objectives (WCEDa, 1987) • Public procurement brings sustainability (Preuss, 2009) |
| AWARENESS | <ul style="list-style-type: none"> • Spirituality breeds awareness in organisations which in turn leads to creativity and innovation (Freshman, 1999) | <ul style="list-style-type: none"> • Environmental deterioration increases consumer awareness leading to the innovative concept of green purchasing/environmentally conscious purchasing (Min & Galle, 2001a) |
| COMMUNITY | <ul style="list-style-type: none"> • A critical dimension of workplace spirituality involves 'having a deep connection to, or relationship with, others that has been articulated as a sense of community' (Ashmos & Duchon, 2000, p.9) | <ul style="list-style-type: none"> • SP dimensions are human rights, diversity and environment (Carter & Jennings, 2004) • Local procurement contributes to social aspects of sustainability leading to 'community benefit clauses' (Preuss, 2009a) |

Source: Author

The management and business disciplines literature is linked to spirituality studies in regard to the facilitation of moral behaviour, virtuous living, honesty and ethical business practices (Fry et al., 2005; Gotsis & Kortezi, 2008; Sheep, 2006). Similarly, Smith (2006, p. 8) states that workplace spirituality is also about ethics and values and is concerned with meaningful work that can enhance ethical business practices. Workplace spirituality is also about social responsibility and environmental awareness (Kolodinsky et al., 2008).

For Freeman (2005), business is a moral activity, inseparable from ethics. Similarly, Jordan (2006) writes that organisations should promote honesty, responsibility, accountability and trust. There is a body of literature stating that spirituality is about honesty, ethical issues in organisations, moral activity, responsibility, and environmental awareness. Hence, the span of workplace spirituality embraces the concepts of ethics, values, social and environmental responsibility.

Moving to sustainable procurement literature, it is evident that it embraces the environment, human rights, ethics and responsible purchasing (Walker & Brammer, 2009; Walker & Preuss, 2008). Similarly, sustainable procurement incorporates fair working conditions, ethical behaviour and the adoption of policies that are environmentally sustainable (apcc.gov.au).

It is therefore reasonable to state that spirituality and sustainable procurement concerns ethics, environment and wellbeing. Sustainable procurement concerns human wellbeing such as human rights, labour laws, and working conditions, including salary and wages. Thus, spirituality and sustainable procurement share a number of common elements.

Spirituality is inspired responsibility towards other (Pruzan & Pruzan, 2007; Pfeffer & Veiga, 1999) and sustainable procurement believes in responsibility that generates benefits not only to organisations but also to society, the economy and the environment (apcc.gov.au). Spirituality enhances wellbeing and a virtuous life (Kolodinsky et al., 2008, Wills, 2009), similarly the socio-economic criteria of sustainable procurement has a basis for ‘wellbeing powers’ (Preuss, 2009) and procurement should meet needs in the general interest (Joseph Rowntree Foundation, 2002).

Spirituality enhances the sense of obligation and loyalty toward others (Rego & Cunha, 2008) and procurement is an overarching obligation to treat potential suppliers as equitably as possible (*Commonwealth Procurement Guidelines* 2008, sec. 6). Thus, both spirituality and sustainable procurement embrace wellbeing. Key social consideration of sustainable procurement is also about obligation to recruit unemployed persons or persons with disabilities; to set up training programs; and comply with fundamental human rights guaranteed by the ILO (United Nations Procurement Capacity Development Centre, 2012). Consequently, both spirituality and sustainable procurement embrace wellbeing.

Hence, there is a body of literature that confirms the existence of common elements between spirituality and sustainable procurement – although it is acknowledged that they share only some of the same dimensions, not all. But it is important to recognise which objectives they share and how the literature acknowledges that fact.

Table 2.3 above showed that spirituality and sustainable procurement are about responsibility, social wellbeing, and ethical business practices. Sustainable procurement

takes into account the environmental, social and economic issues relating to both the present and future generations, becoming more responsible and conscious about fair trade practices and maximising benefit for the whole community via purchasing and procuring. Spirituality also enhances ethical business practices (Giacalone & Jurkiewicz, 2003) and sustainable procurement stands for fair competition and ethical behaviour (apcc.gov.au; Chancellor, 2002; Joyner & Payne, 2002).

Environment thinkers and scientists believe that a spiritual view of nature needs to be underpinned with a scientific or a practical view of nature and thus have established a strong connection between morality and care for the ecology (Kinsley, 1995; Palmer, 1998), similarly sustainable procurement involves the protection of the environment (Kennard, 2006).

Studies have confirmed that workplace spirituality provides employees with a sense of community and joy, which encourages them to think of the larger good (Duchon & Plowman, 2005) whereas procurement contributes to social aspects of sustainability leading to community benefit (Preuss, 2009a). It is evident then that spirituality and sustainable procurement share the common elements that lead to community wellbeing. At first glance, the union of spirituality and sustainable procurement appear to be diametrically opposite and in conflict with each other, but they both share number of complementary components. The core ideologies of workplace spirituality and sustainable procurement are based on mindful ways of doing business, increasing awareness within the organisation, and increasing responsibility and holistic values.

Sustainable procurement concerns human decisions such as buying and purchasing, awareness of ecological sustainability and support for recycled and reusable products (McCrudden, 2008). As a result, human beings play an extremely pivotal role in making sustainable progress. In his thesis, Beazley (1998) discovered a high level of correlation between spirituality and honesty and service to others. In accordance, Lozano and Ribera (2004) argue that spirituality has the potential to be a source of quality for an individual as well as for society. They add that if knowledge is the key asset then developing human quality should be enhanced. For Zsolnai (2010) to improve the ethical quality of our economic activities it is necessary to be motivated ethically and to realise that there should be no tricks in ethics. Thus, there is a link between spirituality and sustainable procurement, which supports socio-economic wellbeing and moral standards.

As Haake and Seuring (2009, p. 282) state: ‘All areas of human activity must follow the imperative of sustainable development’. Along the same vein, Balagangadhara (2010) says that there is a relationship between corporate collapse and spirituality from the standpoint of spirituality. The unethical actions undertaken by firms’ CEOs or senior executives are not simply matters of unethical conduct; they are ultimately of psychological concern. The important questions are: Why one does not feel responsible? Why is there an insatiable desire or greed? Why does one not feel connected to others? Similarly, Waddock (2006) states that corporate scandals are the result of self-centeredness, greed, egoism and selfish passion; they are not a consequence of caring for others. The spirituality literature is linked to positive outcomes and benefits associated with the sense of building community (Cavanagh et al., 2001).

Thus, spirituality here is a tool to combat unethical behaviour whereas sustainable procurement has a vast component of ethics as its rationale (Carter & Jennings, 2004). The link in this case is focused on ethics.

Gotsis and Kortezi (2008) anticipate that the concept of workplace spirituality will prove meaningful by contributing to the corporate reality, making it deeper and more meaningful, whereas procurement is concerned with continuous improvement and innovation to promote proper consumption and manage demand (apcc.gov.au).

Workplace spirituality is all about interconnectedness, not only with people but also with the environment (Mitroff, 2003; Mitroff & Denton, 1999) and, similarly, sustainable procurement is about socially responsible practises involving social, human, and environmental welfare. It is evident then that both workplace spirituality and sustainable procurement are fundamentally based on concern for others, rather than self-interest and greed, and this concern ultimately stimulates sustainable behaviour.

Mitroff (2003) extends the notion of connectedness to incorporate people and the environment so that he finds that workplace spirituality enhances the awareness of workers about how their organisation affects the environment. This awareness takes a wider perspective beyond the self and the organisation, so that conscious decisions are generated that minimise environmental damage. In a similar vein, sustainable procurement policies involve protection of the environment. Kennard (2006) and Jackson (1999) state that the feeling of connection resulting from workplace spirituality expands understanding and depends on a sense of morality which in turn promotes more ethical

and conscious decision-making. In this way, the literature does reveal a link between spirituality and sustainable procurement that has not been made previously.

There is also a disclosure of spirituality and moral actions such as Gull and Doh (2004) who state that enhanced spirituality stimulates moral imagination and this promotes more responsible, more ethical, more collaborative and correspondingly more creative behaviour in the workers. Simultaneously, environmental deterioration increased consumer awareness leading to the innovative concept of green purchasing and environmentally conscious purchasing (Min & Galle, 2001a).

This thesis investigates the sustainable procurement behaviour of procurement professionals by exploring their purchase behaviour, which includes the purchase of recycled products, their conditions of work, including safety, their life cycle and the general awareness of sustainable procurement within their university.

The above discussion brings into focus the commonalities between spirituality and sustainable procurement. These commonalities are highlighted in Table 2.3 above.

Narayanan's research (2008) paved the path for the spirituality and sustainable procurement relationship. The earlier notion of business was limited to profit, revenue and wealth maximisation, but more recently organisations are changing their philosophy from hard core revenue generators to more responsibility-oriented workplaces based on conscientious business practice that is concerned with the holistic wellbeing of social, environment and economic factors. Fry and Slocum (2008) say that there is a new trend adopted by organisations such as SAS Institute, Google, Shell Oil Co, NEC Corp and

Procter and Gamble who are dedicated to follow a model that accentuates ethical leadership, employee wellbeing, sustainability and social responsibility and who believe that this holistic approach can be achieved without sacrificing profitability, revenue growth and other financial indicators of growths. Fry (2003) similarly sees contemporary organisations promoting holistic wellbeing and displaying spiritual leadership styles.

Conger (1995) states the importance of spirituality lies in balancing the internal and external life of an individual. Fox (1994) elaborated on this idea and stated that an individual connects to work and work connects to the inner being, which is limitless.

Ray (1993) sees this paradigm shift as a move towards ‘wholeness and connectedness’ and doing business from our most profound inner awareness and in connection with the consciousness of others and the earth. ‘Consciousness is interconnected to everything and ultimately this will promote the development and achievement of an individual, organisation and the larger environment’ (Maharishi, 1995a, p. 11).

Orr (2002) states that there are challenges to sustainability and that the transition to a sustainable future is not easy to predict as it can be achieved gracefully or catastrophically. If we want to proceed gracefully, he recommends that it is essential to first look, at better ways to measure human effects on the biosphere; second, to improve capacities for good governance; third, improve education; and fourth, to enhance spiritual awareness. This thesis seeks an alternative way to enhance sustainable procurement activities by investigating its relationship with spirituality.

Dunphy (2009) states that the emerging view can be seen in terms of ecology, giving an example of a body that is an ecological entity in itself with an internal energy driven by a web of living cells working together to survive, thrive and reproduce. Furthermore, this broader perspective of spirituality embraces self-awareness and collective purpose, which is also shared by sustainable procurement.

Furthermore, Dunphy (2009) states that future organisations will be intuitively attentive and sensitive to one's biosphere. Thus, the concept of mindfully living and decision-making, triangulation of ecological, environmental and social sustainability and interconnectedness will find a central place in modern organisations. This will be a new form of thinking that will influence the future in a sustainable manner. The more widespread use and application of workplace spirituality is in organisations, the more likely it is that there will be an increase in sustainable practices that will ultimately contribute to a healthy community and natural environment.

The two concepts of spirituality and sustainable procurement have been linked before and also adhere to Dunphy's (2009) perspective. With the increase in workplace spirituality research and its acceptance as a credible discipline, both academic and other organisations will have the conceptual tools to contribute to a better future, environment and society. Lips-Wiersma (2002) suggests that organisations can benefit from spirituality in the way it creates 'creativity and intuition', increases empowerment, leads to a more cohesive vision and purpose and thus builds team and community building. Similarly sustainable procurement is continuous improvement and innovation, which stands for proper consumption and sustainable ways to manage demand (apcc.gov.au).

Bubna-Litic (2009) believes that spirituality interpenetrates the consciousness of organisations that are dependent on a vast network of circumstances and whose existence arises not only from financial capital but also from natural, social and symbolic capital. He also points out why spirituality should be further investigated and provides the reason for the inclusion of spirituality in the mainstream. The first comprehensive book, *Spirituality and Corporate Social Responsibility*, which justifies the relationship between spirituality and corporate social responsibility, is also edited by Bubna-Litic (2009).

Others have similar refrains. Mitroff and Denton (1999, p. 83) believe that ‘organisations should harness the immense spiritual energy within each person in order to produce world class products and services’. Fox (1994) says that it is the result of deep spirituality that a person works without an extrinsic purpose in mind; ‘work for the sake of working and love for the sake of loving and live for the sake of living’ (p.79). Life becomes very meaningful because something inner is deeply satisfied (Fox, 1994).

A recent empirical study conducted by Wills (2009) demonstrated that spirituality results in a virtuous life. Similarly, an earlier study by Giacalone and Jurkiewicz (2003) reflected that individual spirituality enhanced ethical thinking and decision-making. Thus, it is considered appropriate to state that spirituality is linked with diverse forms of ethical business activities. Sustainable procurement also encompasses features of virtuous and ethical living such as purchasing recycled products, using life cycle analysis, giving donations to the local community and to philanthropic organisations (Carter & Jennings 2004). The above elemental analysis of the spirituality and sustainable procurement relationship is summarised in the following figure.

Figure 2.1: Common Elements between Spirituality and Sustainable Procurement



Source: Author

Figure 2.1 above is a summary of Table 2.3, which demonstrated the integration of the spirituality and sustainable procurement concepts and hence their relationship.

In conclusion, the literature neglects to address the theoretical underpinnings between the spirituality and sustainable procurement relationship. From the above discussion it must be recognised that spirituality has a strong potential to promote sustainable procurement values and also to share its elements. This thesis will examine the theoretical association discussed in this section and empirically examine the relationship between spirituality and sustainable procurement within the Australian higher education sector.

The next section addresses the theoretical foundation underpinning of this thesis and the manner in which it is utilised.

2.8: Spillover Theory

This section addresses the theory used in this thesis. However, it is anticipated that spirituality has the potential to impact domains of sustainable procurement such as ethics, philanthropy, human rights and the environment. Researchers have supported this potential by making links with social responsibility and environmental awareness (Kolodinsky et al., 2008). Also spirituality studies in management and business disciplines have been linked to facilitate moral behaviour, virtuous living, honesty and ethical business practices (Fry et al., 2005; Gotsis & Kortezi, 2008; Sheep, 2006). Similarly, Smith (2006, p. 8) states workplace spirituality is also about ethics and values.

After careful consideration, this thesis is based on the Spillover Theory as the literature suggests that spirituality spills into other domains such as wellbeing, productivity, commitment, satisfaction, leadership, decision-making and performance. The principal reason to choose this theory is to investigate the spillover of spirituality into dimensions of sustainable procurement and confirm the relationship between them.

Spillover Theory stands on two types of spillover: Horizontal spillover and vertical spillover. 'Horizontal spillover is the influence of the affect of one life domain on a neighbouring domain' (Wilensky, 1960, p. 219). For example, job satisfaction influences feelings of satisfaction in the family life domain, and vice versa. Vertical spillover, on the other hand, refers to the 'influence of satisfaction in certain life domains on one's overall assessment of life in general (the most superordinate life domain)' (Wilensky, 1960, p. 219). This particular type of spillover is referred to as 'bottom-up spillover'. Horizontal spillover which is also called 'top-down' spillover in which feelings of life such as

satisfaction/dissatisfaction influence satisfaction/dissatisfaction feelings in other life domains such as family, job, health, leisure, and so on' (Sirgy et al., 2001).

Techatassanasoontorn and Tanvisuth (2008) state that 'spillover theories of quality of life allow us to theorize the dynamic process of the duality of bottom-up and horizontal spillovers that concurrently contribute to the overall quality of life. In particular, the bottom-up spillover theory suggests that (dis) satisfaction with events in life domains contribute to (dis) satisfaction in those domains, which then influence the overall life satisfaction. The horizontal spillover theory suggests that (dis) satisfaction with one's life domain may influence (dis) satisfaction in other life domains' (p. 96). Katz (1965) observed that 'work habits and interests of the white-collar worker spillover into his family and community life' (p. 295). In this thesis, it is postulated that spirituality will spillover into the domains of sustainable procurement.

Work and life are not viewed as separate compartments and the meaning of life or work has spillover impacts (DeKlerk, 2005). Therefore, the spillover effect of spirituality on the procurement employees in their sustainable procurement decision-making will impact on the relationship between spirituality and sustainable procurement. Acs et al., (2008) confirmed in their study that there is a strong relationship between knowledge spillover and entrepreneurial activity which is reflected as a creation of a new knowledge or technological opportunity.

As the literature suggests, it is anticipated that spirituality will spillover into the domains of sustainable procurement practices. Therefore, it is justified to theoretically underpin Spillover Theory (Diener, 1984; Wilensky, 1960) which conceptualises the dimensional

aspects of spirituality and its spillover into sustainable procurement. As noted earlier, the Spillover Theory posits that satisfaction in one life domain affects satisfaction in other life domain (Giacalone & Jurkiewicz, 2003, p. 209).

Wilensky (1960) postulated that there is an interaction between the domains of life. People may relate to their 'work and non-work in one of two ways: they may allow positive or negative experience from one domain to generalise or spillover to the other' (p. 545). Thus, if an individual has a highly satisfying family life, this could reflect in his or her work life or other domains. For example, there is a body of literature that suggests that a high level of job satisfaction, organisational commitment and job involvement spills over to employee performance (Milliman et al., 2003; Tischler, 1999).

There is a body of literature that suggests that spirituality has some positive influence on ethical business practices (Giacalone & Jurkiewicz, 2003) and enhances satisfaction leading to a virtuous life (Wills, 2009). Recent studies by Acs et al. (2008), Brown et al. (2009), Shinde et al. (2010), and Sirgy et al. (2010) have also used this theory in their business and management studies. In a similar vein, this thesis will investigate the spillover of spirituality over sustainable procurement, which includes ethics. In this way, the thesis re-applies the Spillover Theory and confirms its suitability for this thesis.

Studies have provided evidence that the spillover effect from workplace spirituality positively enhances family satisfaction, marriage, leisure activities, social interactions, and financial health (Bromet et al., 1990; Crohan et al., 1989; Efraty et al., 1997; Emmons, 2000; George & Brief, 1990; Steiner & Truxillo, 1989), which in turn positively impact their work performance.

Within the business and management literature, it is noted that there is an inconsistency in the spirituality and sustainable procurement studies which build upon theories. Few studies addressed theory such as Fernando and Jackson (2006), Wills (2009), Fry et al., (2005) and Richards et al., (2006). However, theories that have been discussed in some recent workplace spirituality studies were Self Concept Theory; Spiritual Leadership Theory; Contingency Theory of Leadership; Watson's Theory; Grounded Theory; Aristotelian Concept of Eudaimonia; Spillover Theory; Equity Theory; Personal Construct Theory; Human Theory; and Motivation Hygiene theory.

Workplace spirituality and leadership-based studies acknowledged Contingency Theory of Leadership, Grounded Theory and Spiritual Leadership Theory. For example, Gehrke (2008, p.353) identified Spiritual Leadership Theory as it 'traces leadership development from transactional leadership through to transformational leadership ending with transcendental leadership'. Fernando and Jackson's (2006) study is based on Grounded Theory and also discusses the Contingency Theory of leadership, which identifies the similarities and differences in leadership models. Richards et al's (2006) study is based on Watson's Theory of Human Caring as their study was conducted in the healthcare industry, and the researchers state that the primary conceptual elements of the theory provide the unique foundation for nursing practice. Fawcett et al. (2008) refer to Personal Construct Theory and Human Theory in their study because these theories build a bridge in the study schema. Wills (2009, p.53) relates subjective wellbeing to spirituality and his study is based on 'Eudaimonic Happiness as happiness forms a part of a virtuous or ethical understanding of life where wellbeing consists of fulfilling or realising one's daemon or true nature'.

Kolodinsky et al's (2008) study is based on Spillover Theory as this theory conceptualises the influence that spirituality has on attitudinal outcomes such as work rewards and satisfaction. Particularly from the year 2000 onwards, workplace spirituality literature addressed theories in their studies. Previously, this trend was uneven in the literature. Recent theory building is a major contribution to the workplace spirituality literature along with the quantification of the workplace spirituality concept.

Thus, the nature of this thesis and the potential of spirituality spillover over the domains of sustainable development justify the use of this theory. Recent workplace spirituality literature, which is built upon the Spillover Theory, confirms the reliability of this theory. This thesis will investigate the spillover of spirituality into the sustainable procurement domain within the demographic factors that are age, gender, qualification, position, working tenure and annual purchasing expenditure. In doing so, it will contribute to the validity and data of the knowledge base to support the relationship between spirituality and sustainable procurement.

2.9: Australian Higher Education Sector

This section examines the structure of the Australian higher education sector. According to the report by the Australian Council for Private Education and Training (2009), education services is the third largest export category earner for the year 2007–2008 after coal and iron ore. There are 39 universities in Australia (Evans et al., 2008) that generate a total of \$19 billion operating revenue (Magarry, 2008). Parker (2012) states that in the year 2000, Australian universities' income from fees and charges was \$1.7 billion, and by 2007 this figure had risen 68 %. According to the definition on the Australian

government website: ‘A higher education provider is a body that is established or recognised by or under the law of the Australian Government, a State, the Australian Capital Territory or the Northern Territory’ (para.3). The provider has to be approved by the Australian Government Minister for Education before it can receive grants or its students can receive assistance from the Australian Government under the *Higher Education Support Act 2003* (HESA) (deewr.gov.au, para 3).

The Australian government recognises a higher education provider either as a:

- University
- Self-accrediting provider
- Non-self-accrediting provider.

The Australian higher education system comprises:

- 39 universities of which 37 are public institutions and two are private
- One Australian branch of an overseas university
- three other self-accrediting higher education institutions
- non-self-accrediting higher education providers accredited by state and territory authorities, numbering more than 150 as listed on state and territory registers.

These include several that are registered in more than one state and territory.

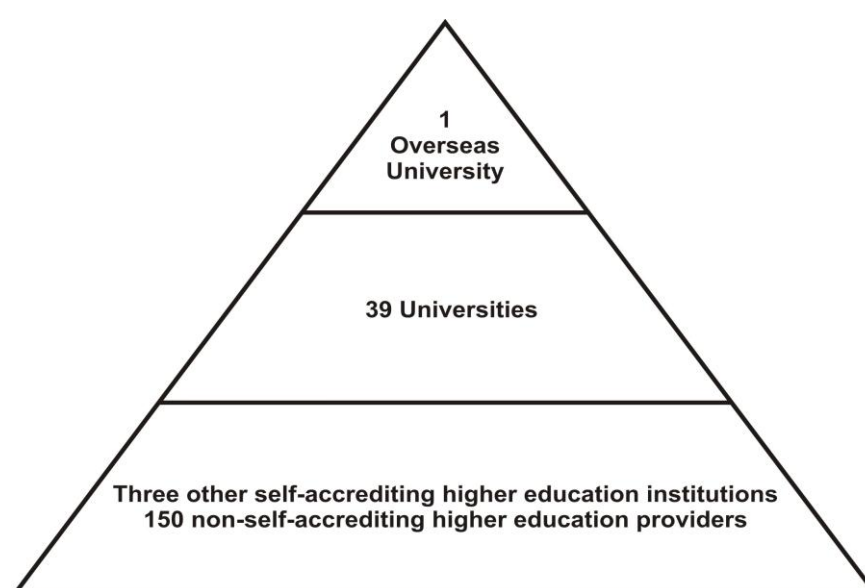
2.9.1: Background of Australian Universities

Australia has a total of 39 universities (one catholic, one secular). The oldest universities were established in the 1850s whereas the new universities are only a decade old. Most universities are established under state acts of parliament (Evans et al., 2008).

Due to its smaller population, the number of universities in Australia compared to other developed countries is low. For example, in the US alone there are 423 universities that confer higher degrees (Evans et al., 2008), whereas Australia has 39 universities. Consequently, there is also an inconsistency in the number of procurement professionals working in Australian universities. For example the University of Melbourne has 55 procurement-related staff, RMIT University has nine procurement staff and the University of New England has five procurement-related staff.

‘The non-self-accrediting higher education providers form a very diverse group of specialised, mainly private, providers that range in size and include theological colleges and other providers that offer courses in areas such as business, information technology, natural therapies, hospitality, health, law and accounting’ (deewr.com.au, para 5). Figure 2.2 below shows the tiers of the Australian higher education sector.

Figure 2.2: Higher Education Pyramid (deewr.com.au)



Source: deewr.com.au

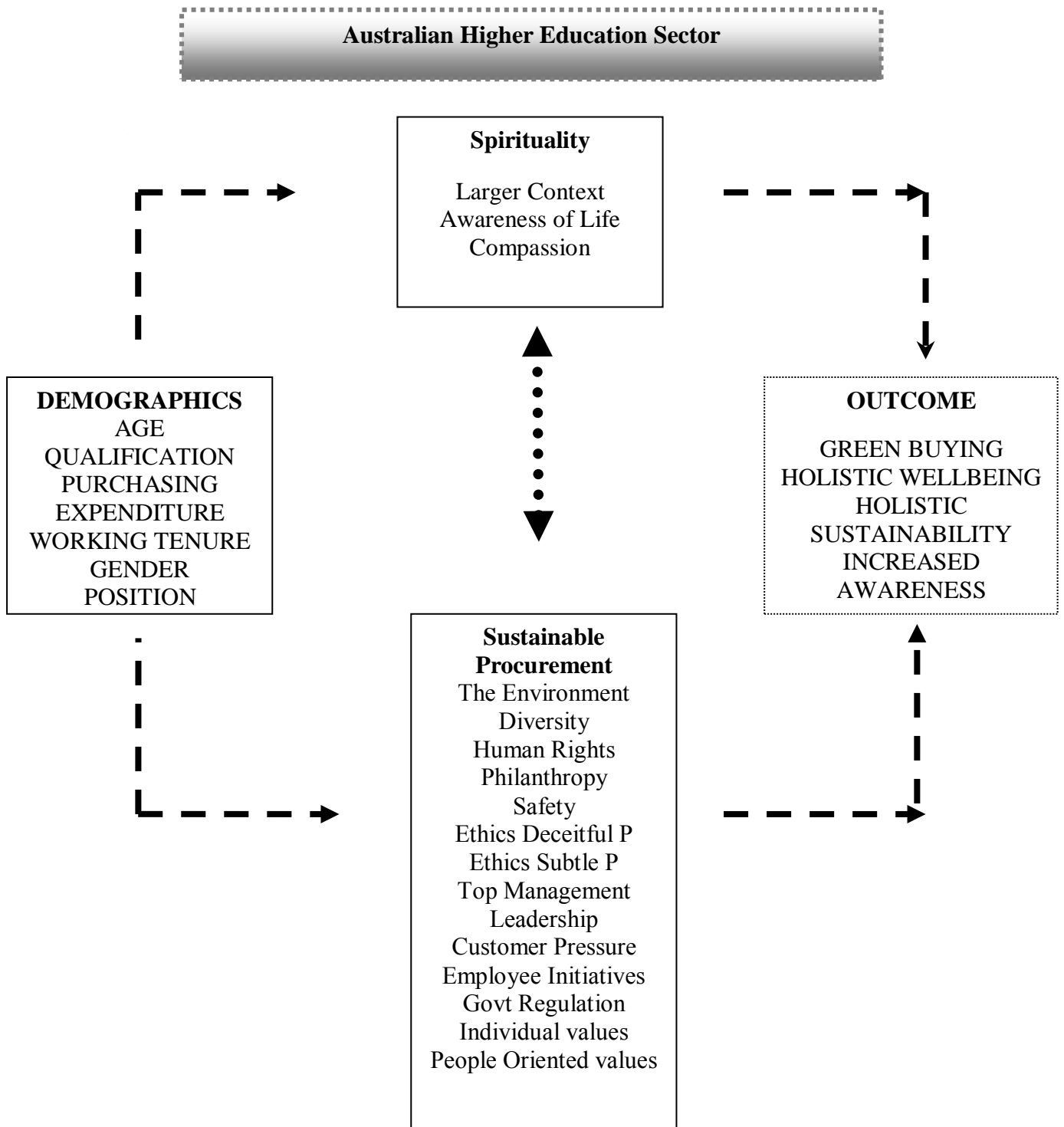
2.10: Conceptual Framework

The aim of this thesis is to gather evidence to test the research questions that examine the relationship between spirituality and sustainable procurement. The thesis also investigates the demographic factors such as age, gender, qualification, working tenure, purchasing expenditure of procurement professionals and its relationship with spirituality and sustainable procurement. The respondents in this thesis are 224 procurement professionals ranging from procurement executives to procurement assistants working within the total 39 Australian universities (deewr.gov.au).

The conceptual framework demonstrated below (Figure 2.3) highlights the interaction of six demographic factors of procurement professionals, three dimensions of spirituality and 13 dimensions of sustainable procurement. The researcher acknowledges that the dimensions of spirituality and sustainable procurement are not limited to the dimensions contained in this thesis; however this is done to maintain the scale consistency. The dimensions of spirituality and sustainable procurement are not altered or transformed. The scale to measure spirituality is the Human Spirituality Scale (HSS) (Wheat 1991) which is a 20-item Likert scale ranging from 1 to 5. The Cronbach's Alpha reliability coefficient is 0.89; which means that HSS is a highly reliable scale. The scale to measure sustainable procurement is developed by Carter and Jennings (2004) and is called the 'Purchasing Social Responsibility Scale'. This scale is most relevant in terms of reliability, validity and accuracy, thus utilised in various recent studies (Salam, 2009, Walker & Brammer, 2012). This thesis stands on pre-test, pilot study and main study. A total of 503 surveys via post (with a prepaid returning envelope) were sent to the procurement professionals for data collection.

The development of the conceptual framework for this thesis derives from a broad review of the spirituality and sustainable procurement literature. This framework guides the thesis and illustrates that there are elements within the spirituality and sustainable procurement that can be investigated as a relationship. The potential outcomes of this thesis as proposed in the conceptual framework are not limited to green buying, holistic wellbeing, increased awareness and holistic sustainability which have practical implications for procurement executives and managers.

Figure 2.3: Conceptual Framework



Source: Author

2.11: Summary

This chapter discussed the developments and progression of the two concepts: spirituality and sustainable procurement. It reviewed the literature of these concepts, including their definitions. The research in these domains is still in the development phase and this thesis addressed a gap in the literature, which omits to investigate the relationship between spirituality and sustainable procurement. The theoretical justification for examining the relationship between spirituality and sustainable procurement is also mentioned through the use of the Spillover Theory as an appropriate conceptual framework for this thesis.

The following chapter addresses the research methodology used to investigate the relationship between spirituality and sustainable procurement.

CHAPTER 3

METHODOLOGY

3.1: Objective

This chapter outlines the research methodology applied in this thesis to investigate the relationship between the emerging concepts of spirituality and sustainable procurement. It provides an argument for the chosen methodology, details the research framework, population frame, research questions, survey instrument, data collection and the scales that measure spirituality and sustainable procurement. The chapter explains the data analysis techniques employed in the thesis and describes the limitations of the methodology employed. The purpose of the thesis is to gather empirical evidence that determines the relationship between spirituality and sustainable procurement within the Australian higher education sector.

The following section describes the research methodology and the reasons why a quantitative methodology has been used for this thesis.

3.2: Research Methodology

There has been a continuous debate over the past 20 years about the effective use of quantitative and qualitative research methods (Creswell, 2009; Creswell & Plano, 2007; Creswell & Tashakkori, 2007; Fidel, 2008). This section discusses research methodology and justifies the quantitative methodology used in this thesis.

3.2.1: Quantitative Methodology

This thesis adopts a quantitative methodology to investigate the relationship between spirituality and sustainable procurement. Hopkins (2008, p. 43) states the ‘aim of quantitative research is to determine the relationship between any two variables’. Quantitative research is described by the terms ‘empiricism’ (Leach, 1990) and ‘positivism’ (Duffy, 1985) that are derived from the scientific method used in the physical sciences (Cormack, 1991). The quantitative research approach is an objective, formal systematic process in which numerical data findings describe, test, and examine cause and effect relationships (Burns & Grove, 1997) using a deductive process of knowledge attainment (Duffy, 1985). The quantitative methods produce legitimate scientific answers (Melia, 1997) that commonly investigate research questions.

In quantitative research, the investigators maintain a detached, objective view in order to understand the facts (Duffy, 1986) and require no direct contact with subjects at all, as in postal questionnaire surveys. Qualitative methodologies also have supposed strengths and weaknesses regarding the closeness of the relationship between researcher and respondent. Duffy (1986) argued that the strength of such an interactive relationship is that the researcher obtains first-hand experience providing valuable meaningful data. As the researcher and the subject spend more time together, the data are more likely to be honest and valid (Bryman, 1988).

In terms of methodology, the research processes used in the quantitative approach include descriptive, correlational, quasi-experimental and experimental research. The strength of such methods is that both ‘true experiments and quasi-experiments provide sufficient information about the relationship between the variables under investigation to enable

prediction and control over future outcomes. This is achieved by the ability of the researcher to manipulate an independent variable in order to study its effects on the dependent variable' (Cormack, 1991, p.19).

The quantitative research is free from biases. Nagel (1986) argues that the observer is separate from the entities that are subject to observation and therefore quantitative pursuits maintain that the investigation should be objective and free from context generalisations. Quantitative research is not concerned with observing people's interpretation, viewpoint or experience; rather, the quantitative researcher tends to remain objectively separated from the subject matter. Therefore, quantitative research can aggregate generalisations (Vanderstoep & Johnston, 2009).

Although qualitative and quantitative methodologies raise different questions at the level of data, both qualitative and quantitative scholars try to investigate how society works, describe social reality, and answer questions about specific instances of social reality. On the other hand, Johnson and Onwuegbuzie (2004) state that taking a non-purist or mixed position allows researchers to mix and match design components that offer the best chance of answering their specific research questions because both the methodologies have different characteristics. These characteristics are that quantitative research focuses on deduction, confirmation, theory/hypothesis-testing, explanation, prediction, standardised data collection and statistical analysis, whereas qualitative research involves discovery, exploration, induction and hypothesis generation.

Workplace spirituality is an amorphous, vast and transcendent area, but Beazley (1998) states that although spirituality is based on transcendent factors, the effects of those

factors are manifested in the material world and thus can be measured. Paradoxically we cannot measure that transcendent factor, but we can have insight and measure certain manifestations of the transcendent world. Similarly, this thesis is not measuring the transcendent forces but their material effects and relationships that are manifested in human and therefore measurable ways. The lack of studies using quantitative techniques, particularly in the workplace spirituality literature, is a critical limitation of this domain. The workplace spirituality literature, particularly in the business and management disciplines from 2005–2011 outlined the reasons why workplace spirituality should be empirically tested. Consequently, this thesis takes heed of this need by empirically investigating the relationship between spirituality and sustainable procurement, while also noting the limitations of this methodology.

The following section addresses the research design for this thesis and provides arguments to justify using quantitative methodology for its investigation.

3.3: Research Design

This section describes the research design and research process used in this thesis. High-quality research design will foresee competing explanations before collecting data so that relevant information for evaluating the relative merits of these competing explanations is obtained (De Vaus, 2001).

According to Sekaran, (1992, p. 94) research design relates to ‘where the study will be conducted (i.e. study setting), what type of study it is (type of investigation), the extent to which the researcher manipulates and controls the study, the duration of the study, the level of the data sample and analysis, and the measurement of variables and how they will

be analysed to test the hypotheses'. When designing research, it is often necessary to consider factors, such as access to participants, response rates, or ethical issues. These factors often shape the research methods employed and the challenge is to optimise the research design to account for these factors. Crotty (1998, p. 6) states that 'methods are the activities used to gather and analyse research data'. Research data can be collected in many different ways and should provide insight into the issue or problem being investigated. It is necessary to choose a data collection method that has synergy with the assumptions of knowledge embedded in the research paradigm selected. It is also crucial to select a data collection method that will shed light on the issue or problem in question.

The three-phase investigation in this thesis is as follows: The pre-test, which is the first stage performed in order to check the structural layout of the questionnaire and to ensure that the response categories to the questions are correct and cross-checked so that there are no unclear, misleading or ambiguous questions (Babbie, 2007; Creswell & Clark, 2007; Creswell, 2008; Sarantakos, 2005); the second stage where the pilot study is performed as the dress rehearsal to the main study. The pilot study checked the effectiveness of the instruments, their reliability and validity (Creswell, 2008; Hakim, 1982, 2000; Kumar, 2005; Sapsford, 2007) and confirmed the reliability of the survey instrument; and the third stage, the main study.

3.3.1: Correlation Study

This quantitative thesis is a correlation research study and it is postulated for this thesis so that there can be a positive, negative or zero relationship between spirituality and sustainable procurement. Tashakkori and Teddlie (2006) state that correlational research determines whether and to what degree a relationship exists between two or more

quantifiable variables and the degree of the relationship is expressed as a coefficient of correlation. A correlation study provides a numerical estimate that is the correlation coefficient and informs the degree of the relationship between two or more variables. In positive relationships, high values on one variable are associated with high values on the other and low values on one are associated with low values on the other. On the other hand, in negative correlations, high values on one variable are associated with low values on the other and this is also sometime termed an ‘inverse relationship’. Zero correlation implies that we know the values of one variable but we don’t know the values of the other variable (Trochim, 2006). Creswell (2003) states that the aim of a correlation study is to assess how two or more variables are related to one another.

There is no database available that lists the contact details of the procurement professionals working in the 39 Australian universities. It was therefore necessary to develop the list of procurement professionals from the website of each university; the consequently developed database comprises just over 500 procurement professionals. In those cases where limited information was available on websites, the universities were contacted for the required information.

This thesis adopts a quantitative research design and uses two highly reputed scales known as the ‘Human Spirituality Scale’ and the ‘Purchasing Social Responsibility Scale’ to measure spirituality and sustainable procurement, which is discussed in detail in this chapter’s ‘survey instrument’ section.

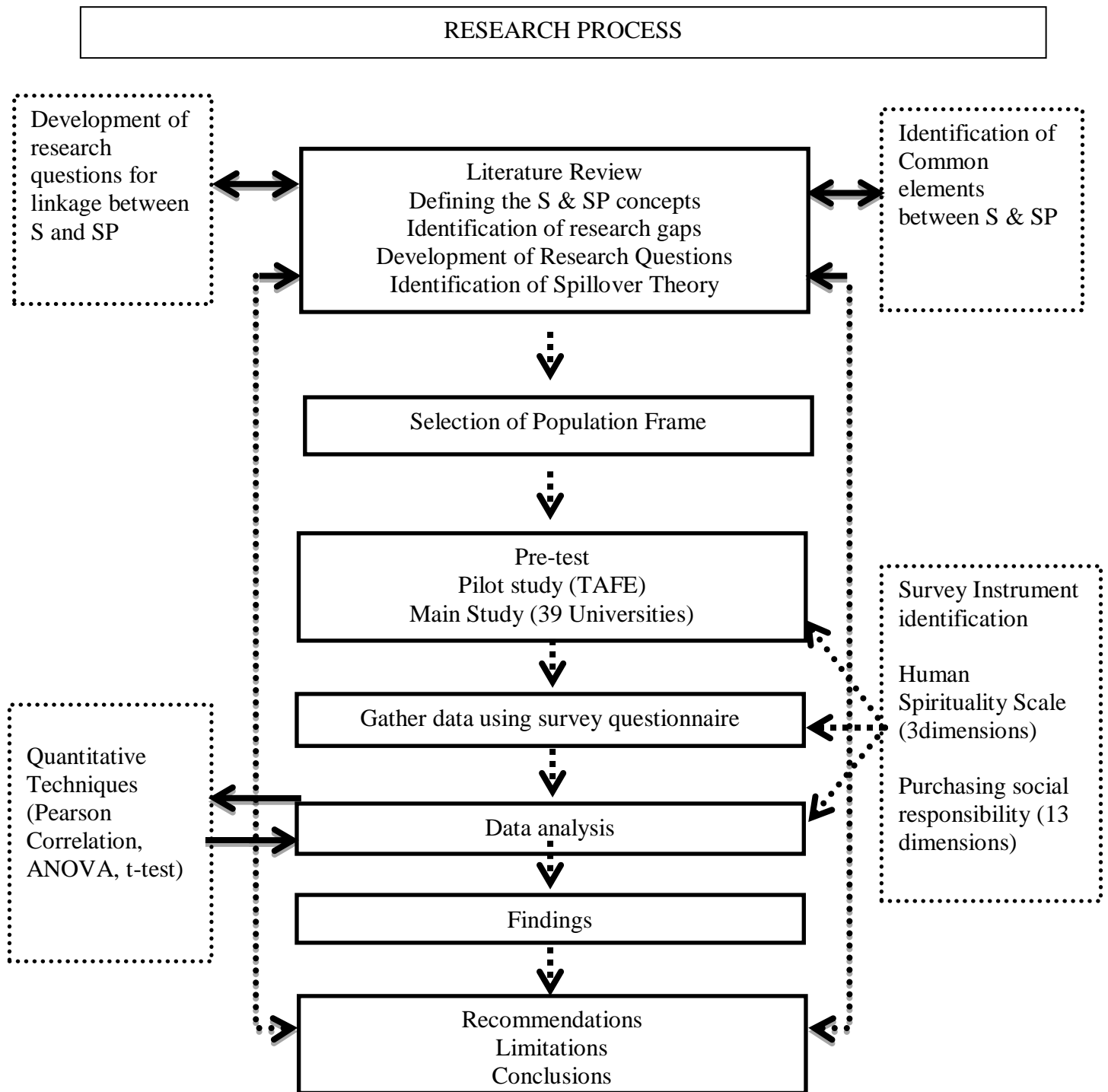
A mail survey method was chosen for this thesis because the population frame (i.e. procurement professionals working in the 39 Australian universities) is spread throughout

Australia. Australian universities are located in different states and many have multiple campuses, such as Latrobe University in Victoria, which has six campuses, including Albury, Mildura and Bendigo. Similarly, Deakin University has four campuses, Geelong Warun Ponds, Geelong Waterfront, Warrnambool and a Melbourne main campus. The University of Technology has two campuses, a city campus and a Kuring-gai campus. RMIT University in Melbourne has five onshore campuses, its city campus and Brunswick, Bundoora, Hamilton and Point Cook campuses.

The mail survey is more personal and respondents have the flexibility to fill out the questionnaire when convenient. Thus, to cover the length and breadth of diversified procurement professionals across 39 universities and their campuses, a mail survey was considered the best option.

The following table presents the research framework ,which informs the research process in this thesis:

Figure 3.1: Research Framework



Source: Author

3.4: Quantitative Research Design

This thesis utilises quantitative methodology after a close enquiry into the workplace spirituality and sustainable procurement literature illustrated its need.

Giacalone and Jurkiewicz (2003, p.19) state there is an urgent call for scientific inquiry into workplace spirituality. They identified four major weaknesses that must be addressed in this newly emerging paradigm to achieve acceptance within the scientific community: ‘(1) the lack of an accepted, conceptual definition; (2) inadequate measurement tools; (3) limited theoretical development; and (4) legal concerns’. This thesis uses two highly reputed and reliable scales known as the Human Spirituality Scale and the Purchasing Social Responsibility Scale. In this way the thesis acknowledges Giacalone and Jurkiewicz’s (2003) call and contributes to the literature; however the use of quantitative methodology is typically low within the Australian workplace spirituality and sustainable procurement studies.

The researcher acknowledges that research methodology is the framework within which the research is conducted. There are many factors to be considered when selecting an appropriate research methodology such as the research questions, the topic to be researched, and suggestions provided in the literature. In this thesis, the reasons to undertake quantitative methodology are:

1. Dominance of qualitative research: a gap in the literature
2. Nature of the thesis
3. Alternative method to measure workplace spirituality and sustainable procurement.

3.4.1: Dominance of Qualitative Research: A Gap in Literature

The literature review showed that the workplace spirituality literature in the business and management disciplines is predominantly conceptual-based, building upon frameworks. Authors have suggested that future workplace spirituality studies should involve quantitative-based investigation. However, there is an inconsistency in workplace spirituality and sustainable procurement studies that utilise quantitative methodology. The present thesis addresses this inadequacy.

According to Rego and Cunha (2008), there is a wide interest and optimism in workplace spirituality but empirical studies in workplace spirituality are scarce. A recent remark by Liu and Robertson (2011) states that existing spirituality studies in business and management disciplines are mostly descriptive and require solid foundations and rigorous approaches from which spirituality can be derived (Dehler & Welsh, 2003). Thus, the literature highlights an urgent call to quantify workplace spirituality.

The conceptualisation of workplace spirituality needs to be extended with experience or empirical data in order to enable more theoretical constructs and detect relationships that could otherwise go undetected (Van de Ven & Johnson, 2006). This thesis extends the spirituality and sustainable procurement literature and highlights the need to examine the relationship between them.

A review of the recent literature also disclosed that workplace spirituality studies are mostly qualitative (Bacchus & Holley, 2004; Case & Gosling, 2010; Cash et al., 2000; Corner, 2009; Crossman, 2010; Dean, 2004; Dent et al., 2005; Fernando et al., 2009; Fry, 2003; Jurkiewicz & Giacalone, 2004; Karakas, 2009; King & Nicol, 1999; Neal &

Vallejo, 2008; Pawar, 2009; Poole, 2009; Wills, 2009) giving rise to the theoretical frameworks and conceptual developments in the literature.

The decade of the 1990s observed the emergence of various concepts such as ‘soulful business practices’, ‘spiritual leadership’, ‘corporate consciousness’, ‘mindful organisations’, and ‘intuitive leadership’. Poole (2009) states that this qualitative trail contributed to the literature by demonstrating the broad ‘why and how’, and later the literature was enriched with more quantitative studies.

There is some quantitative progress in the workplace spirituality literature (Ashar & Lane-Maher, 2004; Dent et al., 2005; Fairholm, 1996, 1997, 1998; Fry, 2003; Fry et al., 2005; Giacalone & Jurkiewicz, 2003; Lips-Wiersma, 2002; Milliman et al., 2003) but, compared to the qualitative development, quantitative studies are typically few and the field is just emerging, particularly within Australia.

However, there are some important studies such as Trott (1996), Milliman et al. (2003), Beazley (1998), Grant et al. (2004), Fawcett et al. (2008), Duchon and Plowman (2005), Petchsawang and Duchon (2009), and Abdullah et al. (2009), which empirically contributed to the workplace spirituality literature. For example, Trott (1996) found a high correlation between organisational openness and spiritual wellbeing. Similarly, Beazley (1998) developed an instrument to measure individual spirituality. Milliman et al. (2003) quantitatively tested and found a positive correlation between spirituality, organisational commitment and intrinsic work satisfaction, and job involvement. A gap in the literature is evident; however, as spirituality is studied with diverse concepts and there is no examination of the relationship between spirituality and sustainable procurement.

Krahnke et al. (2003, p. 5) empirically found the relationship between corporate spirituality and organisational performance. They state that ‘Organisations need conclusive evidence connecting workplace spirituality with bottom line performance; anything less would bring into question their fiduciary and moral responsibility to stockholders’. Similarly, Fry et al., (2005) measured spiritual leadership and its impact on the organisational performance. Such studies contributed to the workplace spirituality literature by quantifying workplace spirituality. This thesis follows the modern literature and extends the workplace spirituality literature by furthering quantitative research. To date, the two concepts of spirituality and sustainable procurement have never been linked before within business and management disciplines.

Moving to sustainable procurement literature, studies have employed both qualitative and quantitative designs. There is no uniform trend in this literature with regard to research methodology, unlike workplace spirituality studies. Procurement studies have chosen the particular methodology according to the requirement and pattern of the study. For example, major quantitative studies in procurement literature have been contributed by Sonnino (2009), Jefferies et al., (2006); Preuss (2009), Thomson and Jackson (2007), Prenen (2008), Walker and Phillips (2006), Dawson and Probert (2007), Preuss (2007), Zsidisin and Silferd (2001) and McCrudden (2004).

Similarly, empirical studies have also identified the most common aspects of sustainable procurement (McMurray et al., 2009). Other quantitative developments in procurement are noted by Marron (1997) and Walker and Brammer (2009).

Highly referenced studies such Haake and Seuring (2009), Dawson and Probert (2007), Preuss (2007) and Prenen (2008) follow the qualitative trend. The qualitative pattern is more subjective in nature and involves seeking to recognise the phenomenon being investigated from the perspective of the human participants (Creswell & Clark, 2007). Krahnke et al., (2003) suggest that both subjective and objective lenses provide a comprehensive overview of the concept.

Thus, this thesis will contribute to the existing business and management literature by quantifying the relationship between spirituality and sustainable procurement.

3.4.2: Nature of the Thesis

Another argument that supports the quantitative methodology is the nature of this thesis, and particularly the research questions that investigate the relationship between spirituality and sustainability procurement. To approach the research questions, which examine the degree of the relationship between the dimensions of spirituality and sustainable procurement, quantitative research is the most appropriate methodology. The degree of the relationship between the dimensions of spirituality and sustainable procurement can be best measured using quantitative research design and statistical techniques. It is postulated for this thesis that there can be a positive, negative or zero relationship between spirituality and sustainable procurement (Trochim, 2006). And, if there is a positive relationship, then it can determine the strength of that relationship. Thus, this correlation thesis looks at the relationship between the variables (spirituality and sustainable procurement) and investigates the association between two or more phenomena (Sheperis et al., 2010).

If the purpose of the thesis were to determine the reasons and understand the rational of spirituality and its influence on sustainable procurement, a more qualitative-based methodology such as case study and interview would have been a better selection. But this thesis is investigating the relationship between two concepts (i.e. spirituality and sustainable procurement), and hence, a quantitative methodology is a more reliable and rational selection. The survey uses two highly reputed and well-established scales available in the literature and gathers the spirituality and sustainable procurement information from the population frame (i.e. procurement professionals working within the Australian higher education sector).

Krahnke et al., (2003) has provided the reasons as to why spirituality should be treated empirically. He states that the empirical nature of spirituality can be measured and seen as a tool to increase productivity, virtue and knowledge in businesses. Although the subjective investigation of spirituality makes it rich, participatory and meaningful, it is also important to integrate the different ways of exploring workplace spirituality.

It is anticipated that diverse methodologies for workplace spirituality will supersede the limits and consequently, determine many useful constructs. Jurkiewicz and Giacalone (2004) state that developments of workplace spirituality require empirical inquiry to test the theoretical formulations; they also suggest that future studies should quantify workplace spirituality. Krahnke et al., (2003) state that quantifying workplace spirituality studies can be seen as a tool to measure and define concepts such as productivity, accountability and equity. They further mention that this empiricism will assist spirituality to be a part of mainstream business related to the variables such as

productivity and profit as evidenced by Fry and Matherly (2006). Thus the limitations of the concept of spirituality can be overcome.

It is clear that the literature review of workplace spirituality studies states the need to further examine the conceptual aspects of workplace spirituality empirically. Therefore, the nature of this thesis and its research questions, in conjunction with the gaps in the literature, justifies using quantitative methodology for this thesis.

3.4.3: Alternative Method to Measure Workplace Spirituality and Sustainable Procurement

Progressive workplace spirituality studies have suggested that there should be an alternative to measure and provide conclusive evidence connecting workplace spirituality with other concepts. As there is a dominance of qualitative constructs, workplace spirituality requires scientific and reliable measurement. It should be placed within multidisciplinary and mainstream research (Krahnke et al., 2003). Thus, building upon these recommendations, the quantitative research design in this thesis will add value to the workplace spirituality and sustainable procurement literature.

An extensive literature review has been conducted to provide the rationale for the quantitative nature of this thesis. Spirituality has been comprehensively studied in various qualitative ways and sustainable procurement research has adopted a mixed method approach. This thesis will add value to the existing literature as Wedemeyer and Jue (2002) state: ‘Spirituality in business can succeed only if the application of spirituality enhances the effectiveness of the organisation and its bottom line’ (p. 14).

Case and Gosling (2010) state the nature of workplace spirituality is an ephemeral phenomenon approachable from multiple perspectives and proponents. However, one of the major limitations highlighted in the workplace spirituality literature is its inability to achieve a place in the epistemological stream. The world congress of Psychology and Spirituality in 2008 raised the issue of measuring spirituality. Three approaches were defined: The first-person approach claims that spirituality is purely subjective and is experienced only by the individual going through the process. The third-person approach is the traditional approach that claims objectivity, but which is not comprehensive enough. Hence, the second-person approach was explored as an alternative, which involves collecting data on spiritual experiences through psychotherapists, counsellors or mentors because they have the means to assess deeper, personal and subjective experiences that surveys cannot touch (Nandram & Borden, 2010).

In a similar manner, Benefiel (2010) states that different research methods for a similar theme sometimes overlap and complement each other. He further mentions that it is necessary that the field of spirituality should be taken seriously and it is possible by developing different research methods that could contribute to the organisational practice.

As previously presented, Fornaciari et al., (2005) analysed 29 empirical articles from the years 1996–2004 that used 65 new scales and found interesting data. First, only 45 % of the studies report factor analysis for evaluation constructs. Similarly, only 45 % of the studies reported the Cronbach's alpha value and reflected it in detail using statistical rigour. The study also found that 38 % reported little basic information related to scale evaluation. They concluded that the theoretical progress of workplace spirituality could

be enhanced if the majority of the workplace studies provided information on item and scale development.

The above sections provide the reasons as to why quantitative research design is chosen for this thesis and how it will contribute to the existing business and management literature.

3.5: Survey Instrument

A survey method was chosen for this thesis to gather the data, which investigates the relationship between spirituality and sustainable procurement. Malhotra et al., (2002) states that a survey obtains information from the respondents and is based on a variety of questions to participants such as reading their behaviour, intentions, attitudes, awareness, motivations, demographics and lifestyle. Tharenou (2000) further states that a survey in correlation studies is most suitable to examine the extent of the relationship between variables or to test the questions.

The survey in this thesis comprises two highly reputed and reliable scales (Human Spirituality Scale and Purchasing Social Responsibility) that are available in the literature. The Human Spirituality Scale has 20 questions and three dimensions which investigate the individual's spirituality. Similarly, sustainable procurement is measured by the Purchasing Social Responsibility scale, which consists of 43 questions and 13 dimensions (five dimensions and eight constructs).

There are a total of 63 Likert scale (5 points) questions in the survey questionnaires and seven questions on demographics, such as the purchasing expenditure of the procurement

professionals, gender, age, job title/position, number of working years in the role, level of spirituality, and educational qualification. This thesis also investigates demographic factors and their relationship with spirituality and sustainable procurement.

The following sections present an overview of the two scales used in this thesis:

3.5.1: Human Spirituality Scale

This thesis uses the Human Spirituality Scale developed by Wheat (1991) in his dissertation, titled *Development of a Scale for the Measurement of Human Spirituality*. This 20-item scale uses a Likert scaling range from 1 to 5 (never, seldom, occasionally, frequently, and constantly). The Cronbach's alpha reliability coefficient of the scale in this thesis is 0.89, which confirms the high reliability of the HSS scale. This robust scale has conducted the content validation including content coverage and content relevance. A panel of five authorities confirms the content relevance of HSS with extensive experience in spirituality, holding doctorate degrees in the field of nursing, psychology and education (Wheat, 1991).

Benson and Clark (1982) suggest that a coefficient alpha value below 0.80 should not be acceptable and requires modification or deletion of the problem items alpha value ranging. Furthermore, Dalaney (2005) states that an alpha value above 0.08 is always acceptable. Thus, HSS is a highly reliable scale.

Joseph (2008), in his dissertation, states that it is adequate to use HSS because it embraces the multifaceted concept of spirituality and is suitable to use within groups. The

respondents for this thesis are divided into three groups, top level, middle management and the first level of procurement professionals, making it reasonable to use this scale.

Recent workplace spirituality studies such as Kolodinsky et al., (2008); Giacalone and Jurkiewicz (2003); and Martinez et al., (2005) used the HSS scale in their studies, also confirming the reliability of this instrument to measure individual spirituality within organisational settings. In this thesis, HSS measures the individual spirituality of procurement professionals, not the organisational spirituality. The Human Spirituality scale is not altered or rephrased and thus the original scale is used. This will maintain the uniformity and consistency of the Human Spirituality Scale which has three dimensions (larger context, awareness of life, and compassion) and there are a total of 20 questions. In the current thesis, the Cronbach's alpha value for the Human Spirituality Scale is 0.881 and internal consistency for the three dimensions of spirituality range between 0.672–0.803. The following section outlines the three dimensions of spirituality and its sub factors:

Dimension One: Larger context

- Being truthful is important to a successful life
- I feel guilty when I don't tell the truth
- I experience a feeling of being whole and complete as a person
- I share my private thoughts with someone else
- It is important that each of us find meaning in our lives
- I put the interests of others before my own when making a decision
- I find meaning in life by creating close relationships
- I listen closely when people tell me their problems
- I actively seek a sense of purpose in my life
- I enjoy guiding young people.

Dimension Two: Awareness of life

- I experience a sense of the sacred in living things
- I experience a sense of connection with other living things
- I set aside time for personal reflection and growth
- I read articles on health and inner peace.

Dimension Three: Compassion

- I value the relationship between all living things
- We should give to others in need
- It is important that we be sensitive to pain and suffering
- All forms of life are valuable
- I feel sad when I see someone else in pain
- I find the world of nature boring.

To measure sustainable procurement, the survey instrument uses the 'Purchasing Social Responsibility Scale' developed by Carter and Jennings (2004). The survey instrument is answered on a five-point Likert Scale with selections ranging from never/almost, to seldom, to occasionally, to frequently, to constantly. The following section describes the sustainable procurement scale.

3.5.2: Sustainable Procurement Scale

Unlike spirituality, there are very few sustainable procurement scales available within the literature, making it highly inconsistent in terms of the use of a specific procurement scale. As per the requirements and the nature of their studies, authors have consequently developed questionnaires, surveys and interview items. There are procurement studies that involve interviews and self-designed questionnaires, both qualitative and quantitative (Dawson & Probert, 2007), case studies (Walker & Preuss, 2008) and multi-methods (Walker et al., 2009).

Questionnaires and survey instruments have also been developed by organisations or firms for their private use, which does not acknowledge the reliability and validity of the instruments. For example, survey instruments such as the ‘Sustainable Procurement Surveys’ developed by Capgemini (Colclough & Tinbolt, 2008), and the New Zealand Business Council for Sustainable Development, the ‘School Food Procurement Questionnaire’ developed by the School Food Trust, ‘Procurement in Action’ developed by EFFICIO (International Procurement Agency) and the ‘Sustainable Procurement Survey’ developed by KPMG in the UK (2007) are not used in published scholarly studies; do not report the validity and reliability of the instruments used; and do not provide the details of how their scales were developed. Also, they have not been used by any academic research or referred journal articles. Consequently, such private instruments were not considered feasible or suitable for this thesis, especially as the scholarly procurement literature illustrates the lack of diversity in procurement scales that measure sustainable procurement.

This thesis uses the scale developed by Carter and Jennings (2004) – the ‘Purchasing Social Responsibility Scale’ (PSR) – which has internal consistency =0.85 and is widely accepted within the procurement literature. This scale is the most relevant in terms of reliability, validity and accuracy; it has been used in recent studies including Salam (2009) published in the *Journal of Business Ethics*. Some distinguished procurement studies have also used this scale such as Brammer and Walker (2007, 2011) and Walker and Brammer (2009). The Cronbach’s alpha value for the PSR scale in this thesis is 0.935 and the internal consistency range between 0.539–0.803.

The PSR scale is a high-order construct (Carter & Jennings, 2004) consisting of five unique dimensions:

1. Environment

- Uses a life cycle analysis to evaluate the environmental friendliness of products and packaging
- Participates in the design of products for disassemble
- Asks suppliers to commit waste reduction goals
- Participates in the design of the products for recycling or reuse
- Reduces packaging material
- Purchases recycled packaging
- Purchases recycling that are of lighter weight

2. Diversity

- Purchases from minority/women-owned business enterprise (MWBE) suppliers
- Has a formal MWBE supplier purchase program

3. Human Rights

- Visits suppliers' plants to ensure that they are not using sweatshop labour
- Ensures that suppliers comply with child labour laws
- Asks suppliers to pay a 'living wage' greater than a country's or region's minimum wage

4. Philanthropy

- Volunteers at local charities
- Donates to philanthropic organisations
- Helps to increase the performance of suppliers in the local community

5. Safety

- Ensures that suppliers locations are operated in a safe manner
- Ensures that safe incoming movement of product to our facilities

Carter and Jennings (2004) have mentioned an extra eight constructs in their study, which they believe constitute responsible purchasing. They are ethics-deceitful practices, ethics-subtle practices, top management leadership, customer pressure, employee initiates,

government regulation, individual values of purchasing employees, and people oriented organisational culture. This thesis includes all the sustainable procurement dimensions including five main and eight constructs, a total of thirteen, to keep the scale consistent. The PSR scale is based on a five-point Likert scale where 1 stands for strongly disagree, 2 stands for disagree, 3 stands for neutral, 4 stands for agree, and 5 stands for strongly agree.

To our knowledge, this scale is widely recognised by renowned procurement academics such as Walker and Brammer (2009) and Brammer and Walker (2007, 2011). Comparing this scale with other SP scales mentioned above, researchers find this scale highly reliable as it is rigorously tested within the scholarly literature and fulfils the requirement of this thesis. The private questionnaires developed by organisations and professional bodies were for their own use and therefore limited in scope. Also, these instruments did not report the validity of the instruments and the development criteria.

Brammer and Walker (2007) confirm that the highly reliable and validated PSR scale embodies a wide range of aspects related to social and environmental improvements. Furthermore, they suggest that this scale reflects the breadth of the concept of sustainability as applied to the context of procurement. The PSR scale has also been reviewed by an expert panel and piloted with 10 public sector procurement officers to ensure efficacy and validity in the public sector. This scale provides a first comprehensive review of CSR in the purchasing context, and also covers the social and environmental aspects (Lau, 2011) and is empirically investigated in more than one country (Carter, 2004, 2005; Carter & Jennings 2004; Salam 2009). Thus, the highly ranked studies cited above confirm the reliability and the robustness of the PSR scale.

3.6: Other Spirituality Scales

The following section presents the availability of different spirituality scales available in the literature. Scales used in the literature include the Spiritual Wellbeing Scale (SWBS); the Spirituality Assessment Scale (SAS), the Spiritual Involvement and Belief's Scale, and the Spirituality Scale. The reasons that the HSS and PSR scales have been chosen for this thesis are outlined above. The purpose of this section is to acknowledge the availability of other spirituality measures discussed in the literature.

3.6.1: Spirituality Assessment Scale

The 28-item instrument 'Spirituality Assessment Scale' was developed by Howden (1992) and signifies the relational aspect of spirituality with four major attributes: purpose and meaning in life, inner resources, unifying interconnectedness, and transcendence. Its internal consistency is $\alpha = .9164$ and its four subscales also have an acceptable level of α ranging from 0.7824-.810. This scale is widely used in counselling and development studies, psychology and psychosomatics.

3.6.2: Spirituality Assessment Scale

Hamilton Beazley developed the Spirituality Assessment Scale in 1998 in his dissertation, *Meaning and Measurement of Spirituality in Organisational Settings: Development of a Spirituality Assessment Scale*. The scale was developed using Thurstone and Likert methodologies and has five spirituality dimensions: living the faith relationship (12 items, $\alpha = 0.8845$), prayer or meditation (9 items, $\alpha = 0.8905$), honesty (11 items, $\alpha = 0.6833$), humility (12 items, $\alpha = 0.5813$), and services to others (9 items, $\alpha = 0.6916$). Beazley (1998, p. 46) says that 'spirituality is based on transcendent factors; the effects of those factors are manifested in the material world and thus can be measured. Paradoxically we

cannot measure that transcendent factor, but we can have insight and measure certain manifestations of that transcendent world’.

Workplace spirituality is an amorphous, vast and transcendent area and hence, this thesis is not measuring the transcendent forces but their material effects and relationships manifested in human and measurable ways.

3.6.3: Spiritual Involvement and Beliefs Scale

This newly developed scale basically measures the spiritual and religious traditions from a number of perspectives (Christianity, Judaism, Islam and Hinduism) and produces four subscales, which are not separated into distinct scales (Hatch et al., 1998). The four subclasses are: external/ritual (13 items), internal/fluid (11 items), existential/meditative (7 items), and humility/personal application (4 items). Mytko and Knight (1999) mentions that more testing is needed to assess the usefulness of this measure in medical populations. Maltby and Day (2001) state that internal reliability statistics are satisfactory for external/ritual ($\alpha = 0.98$), internal/fluid ($\alpha = 0.74$), existential/meditative ($\alpha = 0.70$), and alpha value for humility/perception ($\alpha = 0.51$) subscale is not satisfactory. This thesis investigates the relationship between spirituality and sustainable procurement by not taking spirituality as a component of religion.

3.6.4: Spiritual Well-Being Scale

The Spiritual Well-Being Scale (SWB) (Paloutzian & Ellison 1982) is an instrument that represents the metaphysical and religious aspects of spirituality, including to measure the subjective quality of a person’s life and to examine the religious quality of one’s life, relationship with God, religious well-being and existential wellbeing (relationship with

themselves, community and surroundings)(Ellison, 1983). The scale comprises two dimensions: religious and existential, and has been tested using psychometric measures (Dalaney, 2005). This scale has been widely used in a variety of populations.

A limitation of the Spiritual Well Being Scale (SWB) is that it reflects a Judeo-Christian bias (Fulton & Carson, 1995) and the instrument also contains several methodological flaws that create a potential threat to the content and construct validity and reliability of the scale (Scott et al., 1998).

Some studies have also used the Spirituality Assessment Scale (SAS) developed by Beazley (1998). Most of the spirituality scales are applied in health disciplines rather than business and management disciplines.

Another scale used in workplace spirituality was developed by Ashmos and Duchon (2000), which consists of a seven-point Likert scale survey instrument 'Finding Meaning and Purpose at Work'. This scale was administered in four hospital systems in four different cities and included 700 health care workers. Cronbach's alpha for this scale ranges from 0.69-0.93. Some believe that the Ashmos and Duchon scale is not used extensively and the items are also few in number (McKee, 2008); authors have also questioned its convergent and discriminant validity (Fornaciari & Lund, 2001).

Consideration of the various spirituality scales present in the multidisciplinary spirituality literature led to the decision to use the Human Spirituality Scale to measure workplace spirituality. The reason for this is that first, it has high Cronbach alpha value (alpha = 0.89) compared to others. Second, recent workplace spirituality studies published in high

ranking business and management journals have used HSS in their studies (Giacalone & Jurkiewicz, 2004; Goldstein, 2010; Kolodinsky et al., 2008), therefore it is highly reputed and widely used among research scholars and academe. Studies in business settings as mentioned above have tested it and this scale has also been used in a recent PhD dissertation (Walt 2007) titled *The Relationship between Spirituality and Job Satisfaction*. The dimension of this scale also accords with the research questions, such as its enquiry into the connection with other living beings including nature. Thus, HSS is a well-established scale that is consistent with this thesis' subject matter.

Consideration of all the scales available led to the thesis being based on two scales: 1) the Human Spirituality Scale (Wheat 1991) which measures the spirituality and 2) the Purchasing Social Responsibility (PSR) Scale developed by Carter and Jennings (2004) for measuring sustainable procurement. To avoid the limitations associated with correlation studies, these survey instruments allow the researcher to overcome and predict the degree of relationship between spirituality and sustainable procurement. However, it is believed that multiple measures and observation sometimes also have their own type of errors (Trochim, 2006).

3.7: Research Questions

As the literature review in Chapter Two suggests, there is a wide research gap in the literature, which omits to address the relationship between spirituality and sustainable procurement. The demographic characteristics of procurement professionals working within the Australian higher education sector is unknown and the procurement activities of the area, such as diversity, purchasing amount, environment, safety, human rights and philanthropy is unidentified. It is anticipated that the demographic characteristics will

shape the relationship between spirituality and sustainable procurement and will reveal basic information about the qualification, gender, purchasing expenditure, age and working tenure of the procurement professionals. In this way, future studies can further extend this research.

The research questions investigate the relationship between spirituality and sustainable procurement and also investigate the difference in the perception of spirituality and sustainable procurement within different demographic categories. In this way, the thesis contributes to the literature by investigating the in-depth interrelationships between spirituality and sustainable procurement.

An extensive review of the spirituality and sustainable procurement literature has led to the development of the following research questions.

Research Question 1: What are the relationships, if any, between the dimensions of spirituality and the dimensions of sustainable procurement within the Australian higher education sector?

This umbrella research question investigates the relationship between the three dimensions of spirituality and 13 dimensions of sustainable procurement. The dimensions of spirituality and sustainable procurement are explained in detail in the previous section of this chapter.

The following group of research questions investigate the relationship between spirituality and sustainable procurement more strongly. To disclose the demographic characteristics of procurement professionals is an important research area because demographic characteristics also include educational qualification, purchasing

expenditure which further guides the procurement portfolio, procurement strategy, and the procurement function (UN Procurement Handbook, 2006). Although, in this thesis, the demographic characteristics are not studied in conjunction with procurement strategy and portfolio, future studies can build upon the demographic data and extend the research to a new level.

Thus, the research questions below investigate the demographic characteristics of procurement professionals and its relationship with spirituality and sustainable procurement, including the difference in the perception of spirituality and sustainable procurement. This will attempt to investigate is there any difference (if any) in the perception of spirituality and sustainable procurement within the different demographic factors of procurement professionals.

The following questions investigate the demographic factor ‘age’ of the procurement professionals with spirituality and sustainable procurement.

Research Question 2.1: Is there any relationship between the age of procurement professionals and spirituality and sustainable procurement?

Research Question 2.2: Is there any relationship between spirituality and sustainable procurement within different age categories of procurement professionals?

Research Question 2.3: Is there a difference in the perception of spirituality and sustainable procurement within the different age categories of procurement professionals?

The following questions investigate the demographic factor ‘gender’ of the procurement professionals with spirituality and sustainable procurement.

Research Question 3.1: Is there any relationship between the gender of procurement professionals and spirituality and sustainable procurement?

Research Question 3.2: Is there any relationship between spirituality and sustainable procurement within the male and female procurement professionals?

Research Question 3.3: Is there a difference in the perception of spirituality and sustainable procurement within the male and female procurement professionals?

The following questions investigate the demographic factor ‘educational qualification’ of the procurement professionals with spirituality and sustainable procurement.

Research Question 4.1: Is there any relationship between the educational qualification of procurement professionals and spirituality and sustainable procurement?

Research Question 4.2: Is there any relationship between spirituality and sustainable procurement within different levels of educational qualification among procurement professionals?

Research Question 4.3: Is there a difference in the perception of spirituality and sustainable procurement within the different levels of educational qualification of procurement professionals?

The following questions investigate the demographic factor ‘annual purchasing expenditure’ of the procurement professionals with spirituality and sustainable procurement.

Research Question 5.1: Is there any relationship between the annual purchasing expenditure of procurement professionals and spirituality and sustainable procurement?

Research Question 5.2: Is there any relationship between spirituality and sustainable procurement within different categories of annual purchasing expenditure among procurement professionals?

Research Question 5.3: Is there a difference in the perception of spirituality and sustainable procurement within the different categories of ‘annual purchasing expenditure’ of procurement professionals?

The following questions investigate the demographic factor ‘position level/title’ of the procurement professionals with spirituality and sustainable procurement.

Research Question 6.1: Is there any relationship between the position of procurement professionals and spirituality and sustainable procurement?

Research Question 6.2: Is there any relationship between spirituality and sustainable procurement within the different position levels of procurement professionals?

Research Question 6.3: Is there a difference in the perception of spirituality and sustainable procurement within the different position levels of procurement professionals?

The following questions investigate the demographic factor ‘working tenure’ (years of working) of the procurement professionals with spirituality and sustainable procurement.

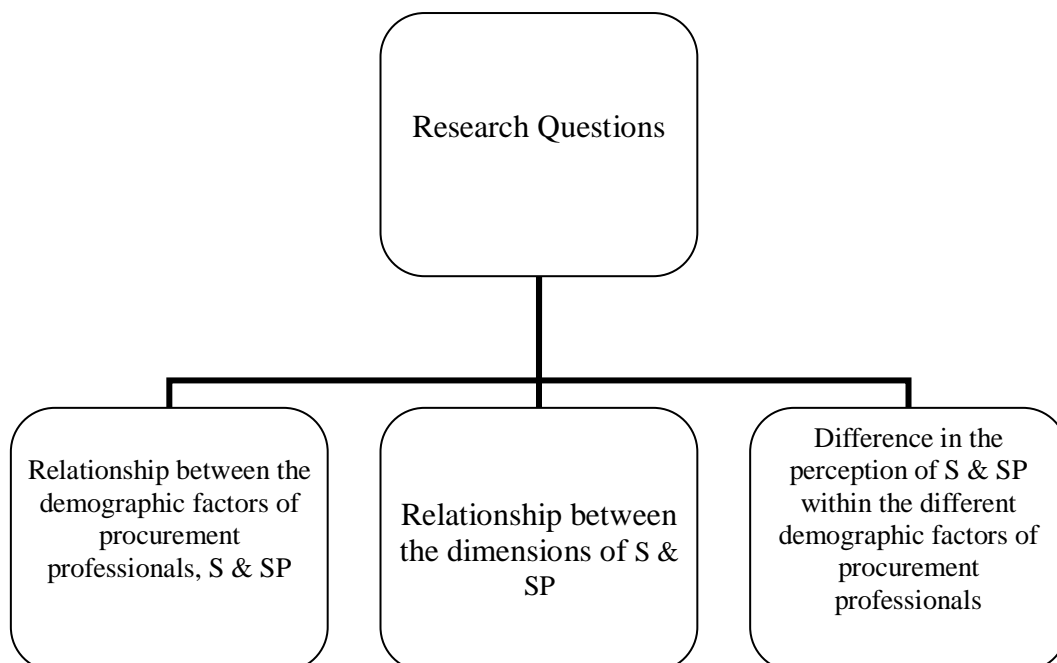
Research Question 7.1: Is there any relationship between the working tenure (years of working) of procurement professionals and spirituality and sustainable procurement?

Research Question 7.2: Is there any relationship between spirituality and sustainable procurement within categories of working tenure (years of working) among procurement professionals?

Research Question 7.3: Is there a difference in the perception of spirituality and sustainable procurement within the different categories of working tenure (years of working) among procurement professionals?

The following figure 3.2 briefly summarises the research questions.

Figure 3.2: Research Questions Summary



Source: Author

3.8: Research Questions Justification

This section justifies why this thesis is not underpinned by a hypothesis and remains open-ended. A research hypothesis is a statement about the relationship between two or more variables that allows measurement or manipulation of the variables (Graziano & Raulin, 1993). In this thesis, the variables are spirituality and sustainable procurement. These are emerging concepts and the relationship between spirituality and sustainable procurement is not discussed within business and management disciplines, hence its suitability for this thesis to examine this area based on research questions. The literature is also devoid of any study or enquiry into the relationship between spirituality and sustainable procurement. Even the theoretical constructs developed for this relationship are not explored, as previously discussed in Chapter Two of this thesis.

There is no body of workplace spirituality and sustainable procurement literature that encourages future research studies to attempt the relationship, thus a specific prediction about the relationship between the variables (Graziano & Raulin, 1993) cannot be hypothesised and hypothetical prediction is not feasible. This thesis does not have any firm proposition about the outcome of the relationship, thus does not build upon a hypothesis. Hypotheses are declarative statements that represent the relationships between two or more variables (Creswell, 2003), but as the prediction of the relationship between spirituality and sustainable procurement cannot be hypothesised without the strong foundation of the literature, there is no hypothesis for this thesis.

The purpose of this thesis is to explore the embryonic concept spirituality and the developing concept of sustainable procurement and the relationship between them. Creswell (2008, p. 36) states ‘Quantitative research questions inquire about the

relationships among variables that the investigator seeks to know. Quantitative hypotheses, on the other hand, are predictions the researcher makes about the expected relationships among variables'. Thus, this thesis does not predicate any relationship between spirituality and sustainable procurement; this eliminates redundancy (Creswell 2008). Recent workplace spirituality studies such as Kolodinsky et al., (2008), Milliman et al., (2003) and Grant et al., (2004) are based on research questions rather than hypotheses – unlike McKee et al. (2011), who explore the link between transformational leadership, workplace spirituality and wellbeing in the health care sector by building upon hypotheses. Thus, literature is available and developing in the spiritual leadership domain; but the empirical and theoretical evidence that supports the relationship between spirituality and sustainable procurement is absent. There is no neighbouring literature within the spirituality and sustainable procurement literature that inform the probable relationship between them. Hence, the research questions in this thesis will form a valuable contribution in hypothesis building for future studies.

3.9: Population Frame

The population frame for this thesis is procurement professionals or their equivalents that participate in diverse procurement actions, decisions and activities such as planning, negotiating, purchasing and contracting within the Australian higher education sector. The term 'procurement professionals' is not uniform within this sector and a database of procurement professionals employed in the 39 Australian universities had to be gathered and collated. The total number of universities in Australia is less than the USA which has 7000 higher education institutions including public, private and national universities (Department of Education US, 2011); Canada, which has 90 universities (CBC,2006);

and Japan, which has 87 national universities and 76 public universities (Maruyama, 2008).

Overall, the fewer number of Australian universities (39) has resulted in a limited population frame of approximately 500 procurement professionals. This limitation is also due to the inconsistency in the number of procurement staff employed by each university.

While developing the database, it was found that there were inconsistencies in a number of areas. For example, a few universities have a separate procurement board whereas others do not. There is also an inconsistency in the number of procurement professionals recruited by each university, for example, the *Group of Eight (Go8)* universities have more than 50 procurement-related staff whereas other universities have less than ten procurement-related staff. Also, as this thesis investigates the spirituality and sustainable procurement relationship within the Australian higher education sector, the population frame can only consist of procurement professionals. If it were general management, a larger sample could have been gathered. Consequently, for these reasons, the numbers of respondents were restricted to a total of 503.

The list of procurement professionals was developed from the website of each university. When only limited information was available on the website, the particular department/university was contacted for further information.

In Australia, there is no database for procurement professionals working in the higher education sector. The most popular and widely used job website in Australia is www.seek.com.au, which suggests that procurement professionals within 39 Australian

universities are recognised as Procurement Analyst, Procurement Specialist, Manager (Procurement Strategy), Project Manager (launching Operations), Project Director, Executive Director Procurement, Strategic Procurement Manager, Procurement Project Manager, Procurement Administration Officer, Procurement Officer, Manager Contracts and Procurements, Purchasing Assistant, Store Manager, Procurement Specialist, Procurement Planner, Purchasing Officer, Procurement Expert and Procurement Coordinator. These different titles are not consistent in the universities. Thus, in this thesis, to overcome ambiguity, the term 'procurement professionals' has been used which incorporates all of the above.

This population frame provides a substantial and relevant target population for examining the relationship between spirituality and sustainable procurement and focusing on the procurement professionals also best suits the thesis' research questions. In relation to the departmental composition of the university sector, this population frame draws upon the full range of procurement professionals in the 39 Australian universities. This is the first time in the business, management and procurement literature, particularly in Australia, where 503 procurement professionals in the Australian higher education sector are surveyed to examine the relationship between spirituality and sustainable procurement.

The role of procurement professionals is crucial because of their decision-making, which includes buying and purchasing that impact on the social and ethical environment. For an idea of procurement expenditure, in 2004 universities spent approximately \$4.4 billion dollars or 43 % of their revenue buying goods and services (Australian Universities Procurement Consortium, 2010). Thus, this research is important because it also investigates the annual purchasing expenditure of procurement professionals working in

39 Australian universities. The two variables involved in this thesis, i.e. spirituality and sustainable procurement, have a special significance because procurement is a critical major economic activity significantly contributing to the sustainable factors. Also, the literature has demonstrated that procurement studies are concentrated in Europe and that sustainable procurement studies are patchy and inconsistent within the Australian context (McMurray et al., 2009) as well as absent in the higher education sector.

In corporations, whether large or small, generally a procurement team is recruited consisting of various procurement professionals, whereas in the Australian universities, there is no consistent approach in the employment of procurement professionals.

In more general terms, the procurement professionals in Australia and New Zealand have not been defined or recognised and their work is often undertaken without professional support. Both countries face a shortfall in professional procurement capacity within the government sector. In general, the national survey of 131 supply chain and procurement hiring managers in Australia conducted by Hudson, provides an indication of the effect that this talent shortage is having on employers of supply chain and procurement professionals (Hudson, 2007).

The value of procurement by the Australian government exceeds \$100 billion per year and \$14 billion per year for New Zealand (apcc.gov.au). The Australian service sector accounts for 70 % of the country's economic activity, which includes banking, insurance and finance, media and entertainment industries, consulting, tourism and retail, services provided by government such as education, health and welfare (www. dfat.gov.au).

3.10: Pre-Test

The purpose of the pre-test in this thesis is to determine the baseline knowledge and to gain a better understanding of the two surveys used in this thesis. In particular, the pre-test was targeted to evaluate the survey instrument in terms of:

- Time required to complete the survey
- The pattern of questions and the language of the survey
- Any hypothesized limitation
- Design and layout of the survey.

The pre-test involved the survey instrument comprising the two scales: HSS and PSR as mentioned above. Seven respondents were included in the pre-test (three Research Students; two full-time employees working as customer relationship managers in a bank and an accountant; and two part-time employees). Backstrom and Hursch (1963) point out that there is no substitute for testing an instrument. They also stated that in pre-testing it is useful to obtain information about the potential problems; hence, a few questions of this nature were asked of the respondents. A pre-test was conducted for this thesis in order to check the design, structure and layout of the survey instrument. This ensured that there were no ambiguous, unclear and misleading questions, and thus progress to the main study could occur (Babbie, 2007; Sarantakos, 2005).

3.11: Pilot Study

The National Centre for Research (2006) states that a pilot, or feasibility study, is a small experiment designed to test logistics and gather information prior to a larger study, in order to improve the latter's quality and efficiency. A pilot study can reveal deficiencies

in the design of a proposed experiment or procedure and these can then be addressed before time and resources are expended on large-scale studies.

In order to test the face value and reliability of the items, a pilot study is conducted before a full study/main study. A few minor changes were made in the survey instrument after the feedback from the pre-test. This includes the change in layout and the addition of two more questions. The respondents for the pilot study are the procurement professionals or their equivalent working in TAFE (Technical and Further Education) colleges within Victoria. TAFE Colleges were randomly selected from the TAFE directory, which can be accessed from <http://www.tafe.vic.gov.au>.

According to Sarantakos (2005), the pilot test is a very important stage in the research regarding the benefits such as the ability to estimate the approximate cost of the main study. It assists in confirming the effectiveness as well as the suitability of the research methods, including their instruments. A pilot study can also ensure the sample frame, the level of response, and the type of dropouts. Furthermore, it determines the degree of diversity and is seen as a dress rehearsal for the main study, enabling the researcher to discover the weaknesses, inadequacies, ambiguities and problems in all aspects of the research, so the research can be corrected before actual data collection takes place.

Teijlingen and Hundley (2001) provided a range of different reasons for conducting a pilot study:

- Developing and testing the adequacy of the research instruments
- Assessing the feasibility of a (full-scale) study/survey
- Establishing whether the sampling frame and technique are effective
- Assessing the likely success of proposed recruitment approaches
- Estimating variability in outcomes to help determine sample size

- Collecting preliminary data
- Assessing the proposed data analysis techniques to uncover potential problems
- Developing a research question and research plan.

The pilot study did not lead to any major modification and strategic change, thus confirming the progress to the main study. The results of the pilot study are discussed in Chapter Four.

3.12: Data Collection

Staples (2010) states that, when designing research, it is often required to consider other factors, such as access to participants, response rates, or ethical issues as these factors often shape the research methods employed. The challenge is then to optimise the research design to account for these factors. Crotty (1998, p. 6) states that methods are the activities used to gather and analyse research data. Research data can be collected in many different ways and should provide an insight into the issue or problem being investigated. It is necessary to choose a data collection method that has synergy with the assumptions of knowledge embedded in the research paradigm selected. It is also crucial to select a data collection method that will shed light on the issue or problem in question.

The data collection method in this thesis is a mail survey. The population frame is procurement professionals or their equivalents working in the Australian higher education sector. The database developed by the researcher from 39 universities suggested that there are approximately 503 procurement professionals or their equivalents employed within this sector. This is an estimate as there is no database available that provides a complete list of procurement professionals or their equivalents. The estimate was achieved by a systematic analysis of the 39 Australian university websites. In most cases,

the name, designation and contact details of the procurement professionals or their equivalents are provided on the university website. Where only the name and designation were provided, the particular university was contacted personally. A total of 503 surveys via post (with a prepaid returning envelope) were sent to the procurement professionals or their equivalent in 39 Australian universities. The pilot study had a response rate of 36 % and gave an indication for the same study.

The population frame was sent a questionnaire including a consent form and a reply paid envelope. The covering letter explained the research, how to answer the questions, including a sample question, ethics approval information, and contact information for the researcher and supervisor.

Raziano et al., (2001) states that postal surveys have a higher response rate to web-based surveys. Postal surveys also have particular benefits as respondents have the freedom to complete the questionnaire in their preferred time. A postal survey also requires personal attention and can reach people who live interstate at a low cost and allows access to 'difficult-to-contact' respondents (those people who only provide post office boxes as addresses). Most of the respondents for this thesis are high ranking and senior procurement professionals, thus the mail survey was considered appropriate. Dillman (1978) recommends that researchers may need three to four follow-up correspondences to increase the return rate. In this thesis, the researcher conducted follow-up emails and telephonic calls.

The mail survey presents as more personal and respondents can fill out the questionnaire in their own time. Another reason for opting for a postal survey is that, as previously

noted, Australian universities are scattered in different states and many of them have multiple campuses. After careful consideration to cover the length and breadth of diversified procurement professionals across different universities and their campuses, a mail survey was considered to be a best option.

3.13: Source of the Participants

There is no database of procurement professionals working in the Australian higher education sector. Thus, in the first instance, a list of higher education providers from the Australian Department of Education, Employment and Workplace Relations' website, accessible at <http://www.deewr.gov.au> was collated. This website shows that the higher education sector in Australia is made up of 39 universities and other higher education institutions. As previously described, the Australian higher education system comprises:

- 39 universities of which 37 are public institutions and two are private
- One Australian branch of an overseas university
- Three other self-accrediting higher education institutions
- Non-self-accrediting higher education providers accredited by state and territory authorities, numbering more than 150 as listed on state and territory registers.

A total of 39 universities constitute the sample organisations. To discard other higher education providers that are not universities is to keep the sample consistent. In the second step, a database was developed comprised of procurement professionals or their equivalents working in 39 universities. This was achieved by a systematic analysis of the websites of all the universities concerned. A majority of these universities has a list of procurement professionals or their equivalents in their websites. In most cases, the name, designation and contact details of the procurement professionals or their equivalents were

provided. Where only the name and designation was provided, the particular university was personally contacted to ascertain the contact details and postal addresses required. The developed database of the 39 universities contains the details of 503 procurement professionals or their equivalents. A total of 503 surveys were then posted (with a prepaid returning envelope) and sent to these professionals or their equivalents.

Thus, the procurement professionals or their equivalents employed in 39 Australian universities are the population frame (Evans et al., 2008) and does not include other higher education providers. Consequently, this a highly specialised population frame as the total number of these professionals is approximately 503. This figure includes three levels of procurement professionals, i.e. top management, middle management and first management. The number of universities in Australia compared to other developed countries is low. For example, in the US alone, there are 423 universities which confer higher degrees (Evans et al., 2008), whereas Australia has 39 universities. There is also an inconsistency in the number of procurement professionals working in the Australian universities.

3.14: Screening and Cleaning the Data

In the first step, data from 224 questionnaires were coded, entered and cleaned by cross checking any errors in the data file, prior to being analysed. A few sources of errors can occur, such as missing data, typing and data entry errors, column shift errors and coding errors (Sweet & Grace-Martin, 2008). Double checking occurred to locate any such errors by checking out range scores, identifying data files and variable parameters and referring back to the hard copy to ensure that correct values were stated (Pallant, 2009). After checking the data errors, a preliminary analysis of the data was performed to assess the

variables and outliers (Hardy & Bryman, 2004). To ensure the accuracy of the data, all returned questionnaires were thoroughly examined. Data screening was conducted using statistical package SPSS version 18. After checking the whole data set, a useable sample size of 224 was obtained.

3.15: Quantitative Techniques

Quantitative data in this thesis was analysed using statistical techniques such as Pearson correlation, t-test, ANOVA (Analysis of Variance). The term ‘statistics’ denotes a set of methods and rules for organising, summarising and interpreting information (Norusis 2008). In the first instance, data were coded prior to being entered into the database of computing software package SPSS v.18 according to the procedures recommended by Pallant (2009). Although, using limited quantitative techniques, this thesis is a fresh investigation and provides a foundation for future studies to consider the in-depth factors governing the relationship between the dimensions of spirituality and sustainable procurement using advanced statistical techniques. The objective of this thesis is to investigate this relationship; therefore correlation analysis, ANOVA and t-test were considered sufficient. The statistical techniques employed in this thesis are discussed as a limitation under the section ‘Methodological Limitation’ in Chapter Three.

Delving deep into data analysis foundations, DeVaus (2002) states that there are four factors that should be taken into consideration for data analysis. They are as follows:

1. The number of variables being examined determines whether univariate (single variable), bivariate (two variables) or multivariate (three or more variables) method of analysis will be used.
2. The level of measurement of the variables decides the analytical techniques.

3. The purpose of the analysis determines the type of statistics. For example, descriptive statistics summarised the response patterns whereas inferential statistics are chosen to generalise the results of analysis for a wider population.
4. It is also the ethical responsibility of the researchers to assess how data are analysed.

DeVaus (2002) states that it is important to report negative results rather than reporting positive results as well. Thus, in this thesis there can be a positive relationship, a negative relationship or a zero relationship between the dimensions of spirituality and sustainable procurement. Kotze et al., (2004) states that it is important to report the negative results because it gives a reason why a certain method yielded this particular result along with a clear explanation of why results differ. Thus, the researcher will notify all the results including positive, negative and zero correlations to ensure that the thesis follows all the ethical principles and the results are not falsified and distorted.

In this thesis, several steps were undertaken for quantitative data analysis including descriptive statistics that are as follows:

3.16: Descriptive Analysis

Descriptive statistics including frequencies and percentages are used to observe the characteristics of a population frame in terms of demographics including gender, age, education level, job title and purchasing expenditure. Pallant (2009) states that descriptive statistics summarise a given data set and describe the basic features of the data in any study and also summarise the sample and form the basis of a virtually quantitative analysis. There is a difference between Descriptive statistics and Inferential statistics. Descriptive statistics describes what data shows, whereas in Inferential statistics the

researcher tries to reach conclusions that extend beyond the immediate data. Inferential statistics make inferences of the data whereas descriptive statistics describe what's going on in the data.

Inferential statistics, which are based on the laws of probability, provide a means for drawing information about a population from a sample (Polit & Beck, 2004). In addition, they assist the researcher to estimate or predict a population parameter, generalise the populations and test hypotheses (Talbot, 1995).

3.17: Pearson Correlation

To measure the strength and direction of the relationship between the dimensions of spirituality and the dimensions of sustainable procurement, Pearson correlation analysis is conducted. Pearson product-moment correlation coefficient (r) is used to identify the relationship between the dimensions of spirituality and the dimensions of sustainable procurement. To measure the correlation coefficient between spirituality and sustainable procurement, the Pearson correlation coefficient is chosen because it measures the strength of a linear association between spirituality and sustainable procurement which is denoted by r . If there is a negative sign in front of the r value, this means that there is a negative correlation between the two variables and vice versa. It is also important to consider the significance level (Sig 2 tailed). Thus, Pearson's r is considered as a useful descriptor of the degree of linear association between two variables and has two key properties of magnitude and direction, and it is recommended when the data are at least interval level (Pallant, 2009).

Correlation analysis investigates the strength and direction of the relationship between the two variables and measures three characteristics of the relationship between the variables which is the direction of the relationship, the form of the relationship and the degree of the relationship (Gravetter & Wallnau, 2004). The Pearson correlation measures the degree and the direction of the linear relationship between two variables. The Pearson correlation coefficients (r) take values from -1 to +1. The sign indicates whether there is a positive relationship, a negative relationship or a zero relationship.

In this thesis, the interpretation of correlation was guided by Cohen (1988), who suggests that correlation within the ranges $r = .10$ to $.29$ or $r = -.10$ to $-.29$ may be classified as small, correlation within the ranges of $r = .30$ to $.49$ or $r = -.30$ to $-.49$ may be classified as medium and correlations within the ranges of $r = .50$ to 1.0 or $r = -.50$ to -1.0 may be classified as large. These values are equally strong, whether positive or negative. The sign indicates the direction of the relationship.

There are three dimensions in the spirituality scale and thirteen dimensions in the sustainable procurement scale. Therefore the total $3 \times 13 = 39$ Pearson correlation coefficient will inform the level of the relationship between spirituality and sustainable procurement dimensions.

3.18: Independent t-test and Levene Test

Pallant (2009) states that the independent t-test compares the means between two unrelated groups on the same continuous, dependent variable. The SPSS t-test procedure allows the testing of equality of variances (Levene's test) and the t-value for both equal- and unequal-variance. Thus, to evaluate the difference in means between two groups in

this thesis such as the difference between male and female in regard to their purchasing expenditure, the t-test is the best option. The homogeneity of variance can be tested using Levene's Test of Equality of Variances that provides an F-statistic and a significance value (P-value). If the significance level is greater than 0.05 then group variance can be treated as equal. However, if $P < 0.05$, then there is unequal variances. The result of the t-test is referred to as the t value. The larger the resulting value of t, the greater the difference between the two means.

To assess the significant differences between two groups it can be checked from Sig (2 tail). If the value in the Sig (2 tail) column is equal or less than 0.05, then there is a significant differences in the mean scores between the two groups. If the value is above 0.05, then there is no significant difference between two groups.

3.19: ANOVA (One-Way Analysis of Variance)

The One-Way Analysis of Variance (ANOVA) is used to determine whether there are any significant differences between the means of three or more independent (unrelated) groups. In other words, one-way ANOVA compares the means between the groups and determines whether any of those means are significantly different from each other. Pallant (2009) states ANOVA is called analysis of variance because it compares the variance between the different groups, with the variability within each of the groups.

3.20: Scale Reliability

This thesis is based on two highly reputed and established scales to measure spirituality and sustainable procurement concepts. Although, the scale has been highly considered

reliable and consistent, this thesis conducted the scale reliability. Pallant (2009) states that reliability of a scale can vary depending on the sample thus, it is necessary to check the reliability of the scale within a particular sample. The reliability of the two scales is conducted in this thesis which is informed by the alpha value which is Cronbach's alpha coefficient. The scale is considered reliable if the alpha value is above 0.7. If the overall Cronbach's alpha value of a scale is low, it needs revising some of the items or removing the items with low item-total correlations.

The higher the Cronbach's alpha, the greater the reliability of the scale will be. A scale has high internal consistency when the items are highly correlated and result in a Cronbach's alpha of greater than 0.7 (Nunnally, 1978). Thus, in this thesis Cronbach's alpha reliability test was run on the data collected to determine the reliability of the scales.

3.21: Methodological Limitations

Quantitative methodology is chosen for this thesis, which is based on the literature and recommendations provided by the past spirituality and sustainable procurement studies. It is critical to note the limitations of quantitative methodology employed in this thesis.

The quantitative results of this thesis are limited as they provide a numerical description of the relationship between spirituality and sustainable procurement. It does not deliver the narrative information about the perception of procurement professionals about the spirituality and sustainable procurement relationship and quantitative results can be too abstract although independent of the researcher's bias. The statistical techniques do not

explore the nature and complexity of human nature that in this case are the procurement professionals (Huges, 2006). The thesis builds upon a pre-existing scale using the Likert scale where there are no self-developed questions; it is a possibility that the population frame finds it difficult to differentiate between 'very good' and 'good' and a response could mark neutrality. The thesis did not employ advance statistical techniques and utilised correlation, ANOVA and t-test to draw conclusions and explore the relationship between spirituality and sustainable procurement. Future studies can further extend this research using advance statistical techniques such as multiple regressions to investigate the subject matter.

Although a significant relationship was confirmed between the dimensions of spirituality and sustainable procurement within the Australian higher education sector, the thesis is subject to the typical limitations of cross sectional research and surveys. The findings of this thesis are limited to the Australian higher education sector, but future research can extend this concept to other sectors using multi-methods.

The nature of this thesis and the research questions is not compatible with the use of a qualitative methodology because it integrates the population frame of 503 procurement professionals across the Australian higher education sector. For a qualitative study, this population frame is not feasible.

3.22: Ethical Issues

The ethical issues related to this research have been formally followed as have the ethics guidelines. Bouma (2002, p. 190) states that all Australian universities require that participants in the research must be able to give informed consent to being part of the

research. Their identity must be protected unless they give written permission to be identified in stored data and research reports. Thus, in the first instance, ethics approval from this research has been granted (B-CHEAN Ref No 1000108). The research is conducted in Australia within the Australian higher education sector. The respondents are procurement professionals or their equivalents working in the Australian higher education sector.

Bouma (2002) summarises five principles of research ethics as follows:

1. Researchers must treat with dignity and respect the persons, groups and organisations that participate in their research
2. Research must be based on knowledge of the work of others in the area and be conducted and/ or supervised by persons qualified to do the work who have the necessary facilities to ensure the safety of participants
3. The potential benefits of a research project must substantially outweigh the potential harm to participants
4. Participants in research must be able to make a voluntary, informed decision to participate
5. Research is a public activity, conducted openly and accountably to both the researcher's community and to the participants in the research

These guidelines were followed and special attention paid to attaining them. Also, as workplace spirituality is a personal and sensitive issue, the questionnaires were based on the following key notes:

1. The researcher will place special importance on protecting the individuality and personal details of a participant. Therefore, the confidential details will be highly

secure and safe so that they are not accessible to anyone except the supervisor and researcher.

2. As this thesis involves information regarding spirituality, the data collection techniques will not involve any item that can evoke the personal sentiments of a participant.
3. The participants can examine the survey before deciding whether they want to participate or not.
4. Participation in this thesis is entirely voluntary and anonymous; therefore, the participants may withdraw before the conclusion of the study.
5. The researcher will pay special importance in analysing the data so that data does not get misrepresented or lost.
6. There is no perceived physical risk or normal day-to-day risk outside the participants' daily activities. All data will be kept securely at RMIT University for a period of five years before being destroyed.

According to DeVaus (2002), there are five ethical responsibilities towards survey participants stressed by the most professional codes of conduct, which are voluntary participation, informed consent, no harm, confidentiality, anonymity and privacy. Voluntary participation means that people should not be required to participate or the participation should be optional for the participants. This research should be classified as Risk Level 1 because there is no physical, psychological or physiological risk attached. Data will be collected using questionnaires that do not contain any risk.

The survey will commence after the respondent has read the plain language statement and agreed to participate in the study. The survey does not include questions that hurt the

feelings of the participants. As this research involves information regarding spirituality, the survey does not contain any question which evokes the personal sentiments of a participant. The participants can examine the data collection technique before deciding whether they want to participate or not. Participants who agree to be involved in this research will be able to withdraw partially or completely at any time or refuse to answer any question. It takes approximately 15-20 minutes to complete the survey. There are no perceived risks associated with participation outside the participants' normal day-to-day activities. Participation in the research is entirely voluntary and anonymous; procurement professionals and their equivalent may withdraw from participation and any unprocessed data concerning any time, without prejudice.

The researcher will pay special importance to protect the individuality and personal details of a participant. Therefore, the confidential details will be highly secure and safe so that they are not accessible to anyone except the supervisor and researcher. The privacy of participants and the confidentiality of data provided by them and their anonymity will be maintained. The investigator will maintain objectivity in the analysis stage to make sure not to misrepresent the data collected. The questionnaire will be sent via post (with a prepaid returning envelope) and the researcher will use her candidature fund to bear the cost of prepaid returning envelopes.

3.23: Summary

This chapter described the research methodology utilised in this thesis, which investigates the relationship between the dimensions of spirituality and sustainable procurement. It discussed the reasons to adopt quantitative methodology and detailed the research

process, research design, population sample, research questions and statistical techniques used for data analysis. The survey instrument consists of two highly reliable and reputed scales which are also described in this chapter. The chapter describes the pre-test and pilot study which enables an indication as to whether to progress to the main study, and contains methodological limitations and future recommendations.

The next chapter presents the data analysis which informs the relationship between spirituality and sustainable procurement.

CHAPTER 4

DATA ANALYSIS

4.1: Objective

This chapter presents the data analysis of the survey and reports the results. It also tests the reliability of the two scales applied in this thesis, interprets the data using statistical techniques, and illustrates the demographic profile of the procurement professionals working within 39 Australian universities.

4.2: Introduction

Chapter Three introduced the research methodology for this thesis and Chapter Four presents the statistical analysis results from the questionnaire. The aim of this chapter is to analyse the survey in response to an investigation into the relationship between spirituality and sustainable procurement within the Australian higher education sector. The Statistical Package for the Social Sciences (SPSS) version 18 was used for analysing the research data. After each section, a summary is provided of the data analysis result.

4.3: Result of the Pilot Study

The pilot study was conducted with procurement professionals and their equivalents working in the TAFE sector in Victoria. The developed database consisted of the name, university postal address, designation and contact details of the procurement professionals and their equivalents. A total of 100 surveys were distributed to these

professionals and 36 useable surveys were considered for the pilot study. Thus, a response rate for the pilot study is 36 %.

The population frame consists of 16 males (44.4%) and 20 females (55.6%) within the age groups of 26–35 years (25%); 36–50 years (55.6%); and 51–60 years (19.4%). The pilot study respondents hold PhDs (2.8%), Masters (47.2%), Bachelors (27.8%), Diploma (11.1%), TAFE (5.6%) and Secondary (2.8%) qualifications.

In terms of the reliability score, the overall reliability for the HSS Scale is 0.876 and for the Sustainable Procurement Scale it is 0.959. However, there is actually no lower limit to the coefficient, the closer Cronbach's alpha coefficient is to 1.0 the greater the internal consistency of the items in the scale. It should also be noted that an alpha of 0.8 is probably a reasonable goal for a Likert-type scale. A high value for Cronbach's alpha indicates good internal consistency of the items in the scale. There were no further problems identified with the survey instrument and data analysis in the pilot study. Thus, this gave a positive indication as to whether to progress toward the main study as Teijlingen and Hundley (2001, p. 36) state: 'well-designed and well-conducted pilot studies can inform us about the best research process and occasionally about likely outcomes'.

4.4: Response Rate

The database developed by the researcher from 39 Australian universities consists of 503 procurement professionals, comprising the population frame for this thesis. A total of 503 mail surveys were distributed to the population frame for the main study. Follow-up telephone calls and emails were also conducted to increase the response rate. A total of

224 usable surveys were returned and considered to be legitimate for this research. Three additional surveys were returned that were not considered useable because they were partially complete with major portions of the survey left blank. This is the first study that involves the total range of procurement professionals working within the Australian higher education sector.

Summary: The main study observed the response rate at 44.50 %, which is higher than the pilot study response rate of 36 %.

4.5: Scale Reliability

Testing the reliability of scales used in this thesis is necessary because it has the capacity to influence the quality of data (Pallant, 2009). This section informs the reliability of the two scales used in this thesis. The two scales are the Human Spirituality Scale (HSS) and the Sustainable Procurement Scale titled 'Purchasing Social Responsibility' (PSR) scale.

The reliability of a scale indicates how free the scale is from random error, and can be illustrated using the most frequently used methods, i.e. an internal consistency score (Pallant, 2009). Internal consistency is the degree to which the items that make up the scale hang together. Cronbach's alpha (α) is a popular index which informs the reliability and has been widely used in social and behavioural research for more than 50 years (Cronbach, 1951). The higher the Cronbach's alpha is, the greater the reliability of the scale will be. Thus, measuring Cronbach's alpha value provides an indication of the average correlation among all the items that make up the scale (Nunnally, 1978; Pallant, 2009). The coefficient alphas for each of the scales used in this research were calculated

using PASW (SPSS) v.18 and are shown in Table 4.1 below. The reliability statistics for the scales is shown in Table 4.1:

Table 4.1: Scale Reliability

| Name of the Scale | Cronbach's alpha Value | No. of items |
|-------------------------------|------------------------|--------------|
| Human Spirituality Scale | 0.881 | 20 |
| Sustainable Procurement Scale | 0.935 | 42 |

Summary: The Cronbach's alpha value for the Human Spirituality Scale is 0.881 and for the Sustainable Procurement scale, is 0.935. Thus, this confirms that the scales are highly reliable.

4.5.1: Internal Consistency

Internal consistency reflects the coherence (or redundancy) of the components of a scale, is conceptually independent of re-test reliability, which reflects the extent to which similar scores are obtained when the scale is administered on different occasions separated by a relatively brief interval (McCrae et al.,2011). The internal consistency for the two scales used in this thesis is conducted to estimate intra-scale reliability. The results are listed below:

Table 4.2: Internal Consistency of the Human Spirituality Scale

| Internal Consistency (HSS) | Cronbach's Alpha (n=number of items) |
|-----------------------------|--------------------------------------|
| Factor 1 Larger context | 0.803 (n=10) |
| Factor 2: Awareness of life | 0.756 (n=4) |
| Factor 3: Compassion | 0.672 (n=6) |

Table 4.3: Internal Consistency of the Sustainable Procurement Scale

| Internal consistency (SP) | Cronbach's Alpha (n=number of items) |
|---------------------------------------|--------------------------------------|
| Factor 1 : Environment | 0.929 (n=7) |
| Factor 2: Diversity | 0.684 (n=2) |
| Factor 3: Human rights | 0.818 (n=3) |
| Factor 4: Philanthropy | 0.913 (n=3) |
| Factor 5: Safety | 0.851(n=2) |
| Factor 6 : Ethics—Deceitful practices | 0.539 (n=4) |
| Factor 7: Ethics—Subtle practices | 0.856 (n=3) |
| Factor 8: Top Management Leadership | 0.849 (n=3) |
| Factor 9: Customer pressure | 0.833(n=3) |
| Factor 10: Employee initiatives | 0.681 (n=2) |
| Factor 11: Govt regulation | 0.802 (n=3) |
| Factor 12: Individual values | 0.737 (n=4) |
| Factor 13: People-oriented | 0.790 (n=4) |

Summary: Thus, Tables 4.2 and 4.3 above confirm that the Cronbach's alpha value for the Human Spirituality Scale (three dimensions) range from 0.672–0.803. Similarly, the Sustainable Procurement Scale has 13 dimensions and alpha value range from 0.539–0.803.

4.6: Demographic Profile of the Population Frame

This section presents the demographic profile of the population frame – procurement professionals working in the Australian higher education sector. The survey contains 13 demographic questions; however not all the questions were considered legitimate for the main study because most of the data was unavailable or missing, thus not included in the thesis. The demographic factors undertaken in this thesis are gender, age, years of working, qualification, current position, and purchasing expenditure as procurement professional.

4.6.1: Gender

Table 4.4 shows the distribution of the population frame with respect to gender. The population frame consists of 92 males (41.1%) and 123 females (54.9%) including nine missing (4%).

Table 4.4: Demographics: Gender of Procurement Professionals

| Gender | Frequency | % |
|---------|-----------|-------|
| Male | 92 | 41.1 |
| Female | 123 | 54.9 |
| Missing | 9 | 4.0 |
| Total | 224 | 100.0 |

Summary: There are more female procurement professionals than males working in the 39 Australian universities.

4.6.2: Age

Table 4.5 shows the distribution of the population frame with respect to age. Most of the procurement professionals are within the range of 51–60 years of age (37.9%). However, 29 % of them are between 36–50 years of age. There are 34 procurement professionals who are above 61 years of age, comprising 15.2 % of the respondents. Table 4.5 below also confirms that there are 14.7 % of procurement professionals who are within the range of 26–37 years of age. The missing frequency is six, covering 2.7 %.

Table 4.5: Demographics: Age of Procurement Professionals

| Age (years) | Frequency | % |
|-------------|-----------|-------|
| 15-25 | 1 | .4 |
| 26-35 | 33 | 14.7 |
| 36-50 | 65 | 29.0 |
| 51-60 | 85 | 37.9 |
| 61-above | 34 | 15.2 |
| Missing | 6 | 2.7 |
| Total | 224 | 100.0 |

Summary: The descriptive demographics confirm that the majority of the procurement professionals are in the age group of 51–60 years of age. Thus, the majority of the procurement professionals are mature age.

4.6.3: Educational Qualifications

The seven different classifications of education qualifications among procurement professionals are PhD, Masters, Bachelors, Diploma, TAFE, Secondary, and other.

The result indicates that the majority of the procurement professionals which cumulates at 45.5 % (n=102) hold a bachelor degree. Following these are 26.8 % (n=60) who possess masters qualifications. The procurement professionals who hold a diploma degree comprises 22.3 % (n=50) of the population followed by 2.2 % (n=5) holding TAFE qualification. Some three procurement professionals have PhDs, comprising 1.3 % of the population frame, and two procurement professionals hold a secondary qualification which is 0.9 %, and there is one in the category of ‘other’ which is 0.4 %.

Table 4.6: Demographics: Educational Qualification of Procurement Professionals

| Qualification | Frequency | % |
|---------------|-----------|------|
| PhD | 3 | 1.3 |
| Masters | 60 | 26.8 |
| Bachelors | 102 | 45.5 |
| Diploma | 50 | 22.3 |
| TAFE | 5 | 2.2 |
| Secondary | 2 | .9 |
| Other | 2 | .4 |
| Total | 223 | 99.6 |

Summary: Table 4.6 above shows that most of the procurement professionals are qualified with bachelors and master's degree. Thus, it can be concluded that the majority of the procurement professionals are highly qualified.

4.6.4: Years of Working

This section informs the working tenure (years of working) of procurement professionals in the Australian higher education sector. The maximum frequency (n=66) confirms that 29.5 % of procurement professionals have been working in the procurement role for 5–8 years and 21.4 % (n=48) have been working in the procurement role for 8–12 years. Then there are 19.2 % of procurement professionals (n=43) who have been working in the procurement role for 2–5 years. Some 16 % of procurement professionals have been working in the procurement role for more than 15 years (n=37) and 4 % have been in this role for less than two years (n=9).

Table 4.7: Demographics: Years of Working of Procurement Professionals

| Years of working(years) | Frequency | % |
|-------------------------|-----------|------|
| Less than 2 | 9 | 4.0 |
| 2–5 | 43 | 19.2 |
| 5–8 | 66 | 29.5 |
| 8–12 | 48 | 21.4 |
| 12–15 | 15 | 6.7 |
| 15– above | 37 | 16.5 |
| Missing | 6 | 1.3 |
| Total | 224 | 98.7 |

Summary: Most of the procurement professionals working in the Australian higher education sector have been working in the procurement role for 5–8 years (29.5%) whereas 4 % of procurement professionals have been working in this role for less than two years.

4.6.5: Position/Job Title of Procurement Professionals

This section of the demographic analysis informs the position/job title of the procurement professionals working in the Australian higher education sector. The position of procurement professionals are broadly classified into three main categories: high level procurement professionals (comprising directors, executive directors), middle management (comprising team leaders, managers, project leaders, officers), and first-level management (procurement administrators). Table 4.8 below shows that the majority of the procurement professionals (n=131) which is 58.5 % are in the middle management category and 18.3 % are top level (n=41) professionals. Then, there are 10.7 % of the

procurement professionals (n=24) who come under the category of first-level management. The missing data is 12.5 % (n=28).

Table 4.8: Demographics: Position/Job Title of Procurement Professionals

| Position/job title | Frequency | % |
|--|-----------|-------|
| Top/high level (Director) | 41 | 18.3 |
| Middle management (management, team leader, officer) | 131 | 58.5 |
| First level management (admin) | 24 | 10.7 |
| Missing | 28 | 12.5 |
| Total | 224 | 100.0 |

Summary: The statistics confirm that the majority of procurement professionals (58.5%) working in the Australian higher education sector are middle-level procurement professionals such as team leaders, procurement managers and purchase officers.

4.6.6: Annual Purchasing Expenditure of Procurement Professionals

This is the last section of the descriptive analysis which shows the purchasing expenditure of a procurement professional in their capacity as a procurement employee. One of the job responsibilities of procurement professional is to do the buying and purchasing for their organisation (university in this thesis).

Table 4.9 below confirms that 67.4 % of procurement professional have an annual purchasing expenditure of more than AUD\$100,000 and above. The next level of

expenditure is between AUD\$75,000–100,000, which is 13.8 %. Some 8.5 % of the procurement professionals confirm that their purchasing capacity is within AUD\$50,000–75,000, whereas 5.8 % have AUD\$25,001–50,000 purchase capacity.

Table 4.9: Demographics: Annual Purchasing Expenditure of Procurement Professionals

| Annual purchasing expenditure (AUD) | Frequency | % |
|-------------------------------------|-----------|-------|
| \$1–25,000 | 4 | 1.8 |
| \$25001–50,00 | 13 | 5.8 |
| \$50,001–75,000 | 19 | 8.5 |
| \$75001–100,000 | 31 | 13.8 |
| \$100,000 and above | 151 | 67.4 |
| Missing | 6 | 2.7 |
| Total | 224 | 100.0 |

Summary: Thus, this finding shows that the majority of the procurement professionals have more than AUD\$100,000 per year to make purchases for their organisation.

4.6.7: Level of Spirituality of Procurement Professionals

This section shows the level of spirituality of procurement professionals. The survey instrument has a question that enquires about five different levels of spirituality ranging from ‘Very Strong, Strong, Medium, Unsure and Not Spiritual’.

Table 4.9a below shows that 29 % of procurement professionals perceived themselves as having a ‘Strong’ spirituality. Similar to this strong level of spirituality, 28.6 % (n=64) believe that their level of spirituality is ‘Very Strong’. There are also 26.3 % (n=59) of procurement professionals who confirm that they have a ‘Medium’ level of spirituality, whereas 4.5 % (n=10) of procurement professionals are ‘Unsure’ about their level of

spirituality. Those who confirm that they are ‘Not Spiritual’ consist of 8.5 % (n=19) and ‘Missing Values’ comprise 3.1 percent (n=7).

Table 4.9a: Demographics: Level of Spirituality of Procurement Professionals

| Level of spirituality | Frequency | % |
|-----------------------|-----------|-------|
| Very Strong | 64 | 28.6 |
| Strong | 65 | 29.0 |
| Medium | 59 | 26.3 |
| Unsure | 10 | 4.5 |
| Not Spiritual | 19 | 8.5 |
| Missing | 7 | 3.1 |
| Total | 224 | 100.0 |

Summary: The majority of the procurement professionals believe that their spirituality level is ‘Strong’ followed by ‘Very Strong’. It is interesting to note that more than 50 % of the procurement professionals working in the Australian higher education sector confirm that either they are strongly spiritual or very strongly spiritual.

4.7: Relationship between Spirituality and Sustainable Procurement

The aim of this section is to answer the research question: ‘What are the relationships, if any, between the dimensions of spirituality and the dimensions of sustainable procurement within the Australian higher education sector?’

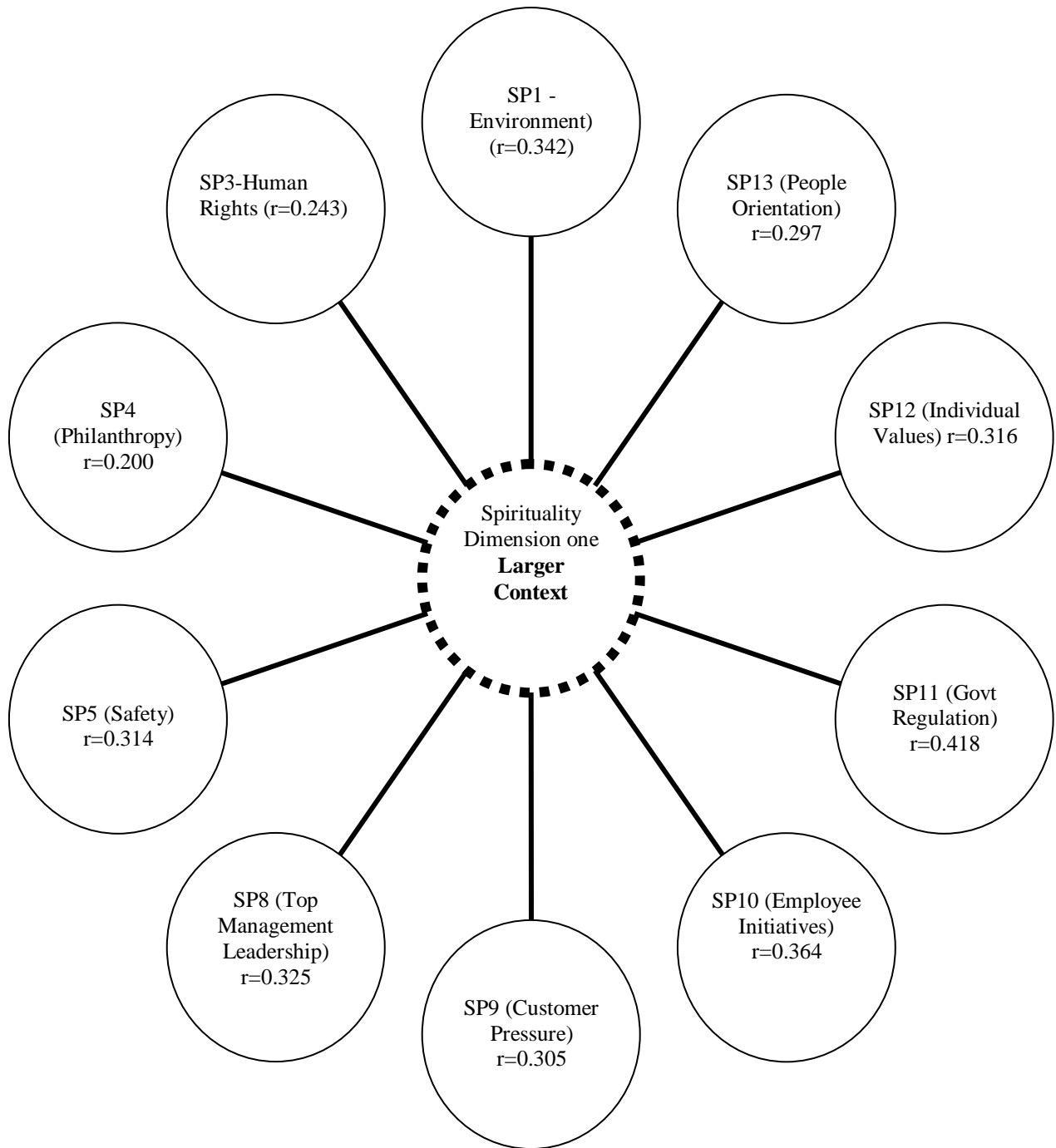
The three dimensions of spirituality are: ‘Larger context’, ‘Awareness of life’, and ‘Compassion’. Similarly, the 13 dimensions (five dimension and eight constructs) of sustainable procurement are ‘Environment’, ‘Diversity’, ‘Human rights’, ‘Philanthropy’, ‘Safety’, ‘Ethics-Deceitful practices’, ‘Ethics-Subtle practices’, ‘Top management

leadership', 'Customer pressure', 'Employee initiatives', 'Government regulation', 'Individual values of purchasing employee' and 'People-oriented organisation culture'.

The relationship between the dimensions of spirituality and the dimensions of sustainable procurement is investigated using the Pearson product-moment correlation coefficient. Figures 4.1, 4.2 and 4.3 below confirm the relationship between the dimensions of spirituality and dimensions of sustainable procurement. Correlation analysis confirms that there are some positive relationships between the dimensions of spirituality and the dimensions of sustainable procurement.

Dimension one of spirituality (Larger context) is correlated with SP1 (Environment, $r=0.342$, $p=0.000$); SP3 (Human rights, $r=0.243$, $p=0.000$); SP4 (Philanthropy, $r=0.200$, $p=0.003$); SP5 (Safety, $r=0.314$, $p=0.000$); SP8 (Top management leadership, $r=0.325$, $p=0.000$); SP9 (Customer pressure, $r=0.305$, $p=0.000$); SP10 (Employee initiatives, $r=0.364$, $p=0.000$); SP11 (Govt regulation, $r=0.418$, $p=0.000$); SP12 (Individual values, $r=0.316$, $p=0.000$); SP13 (People orientation, $r=0.297$, $p=0.000$).

Figure 4.1 Relationships between the First Dimension of Spirituality with Sustainable Procurement Dimensions

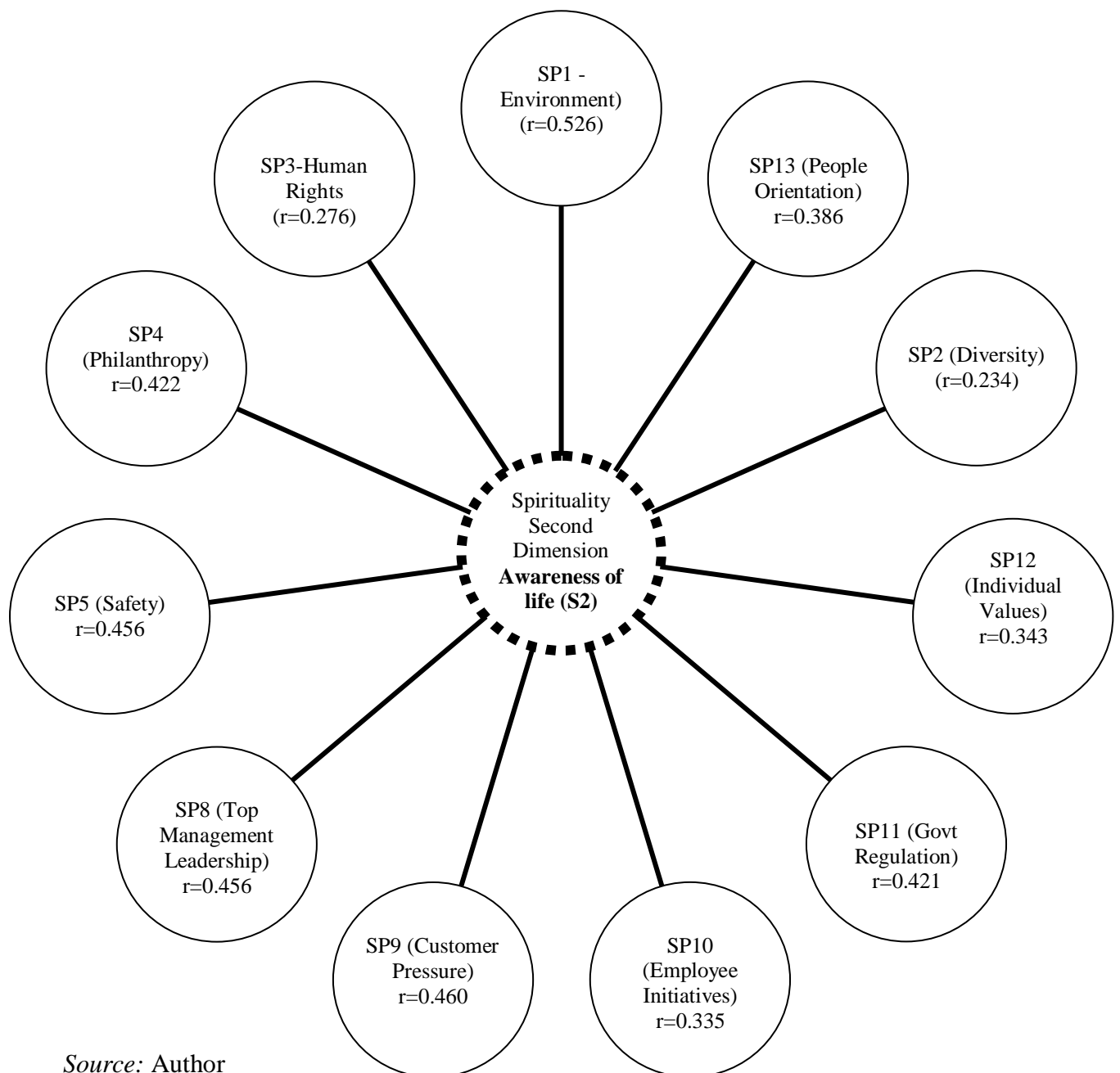


Source: Author

Dimension two of spirituality (Awareness of life) is correlated with SP1 (Environment, $r=0.526$, $p=0.000$), SP2 (Diversity, $r=0.234$, $p=0.000$), SP3 (Human rights, $r=0.276$,

p=0.000), SP4 (Philanthropy, $r=0.422$, $p=0.000$), SP5 (Safety, $r=0.456$, $p=0.000$), SP8 (Top management leadership, $r=0.456$, $p=0.000$), SP9 (Customer pressure, $r=0.460$, $p=0.000$), SP10 (Employee initiatives, $r=0.335$, $p=0.000$), SP11 (Govt regulation, $r=0.421$, $p=0.000$), SP12 (Individual values, $r=0.343$, $p=0.000$), SP13 (People orientation, $r=0.386$, $p=0.000$).

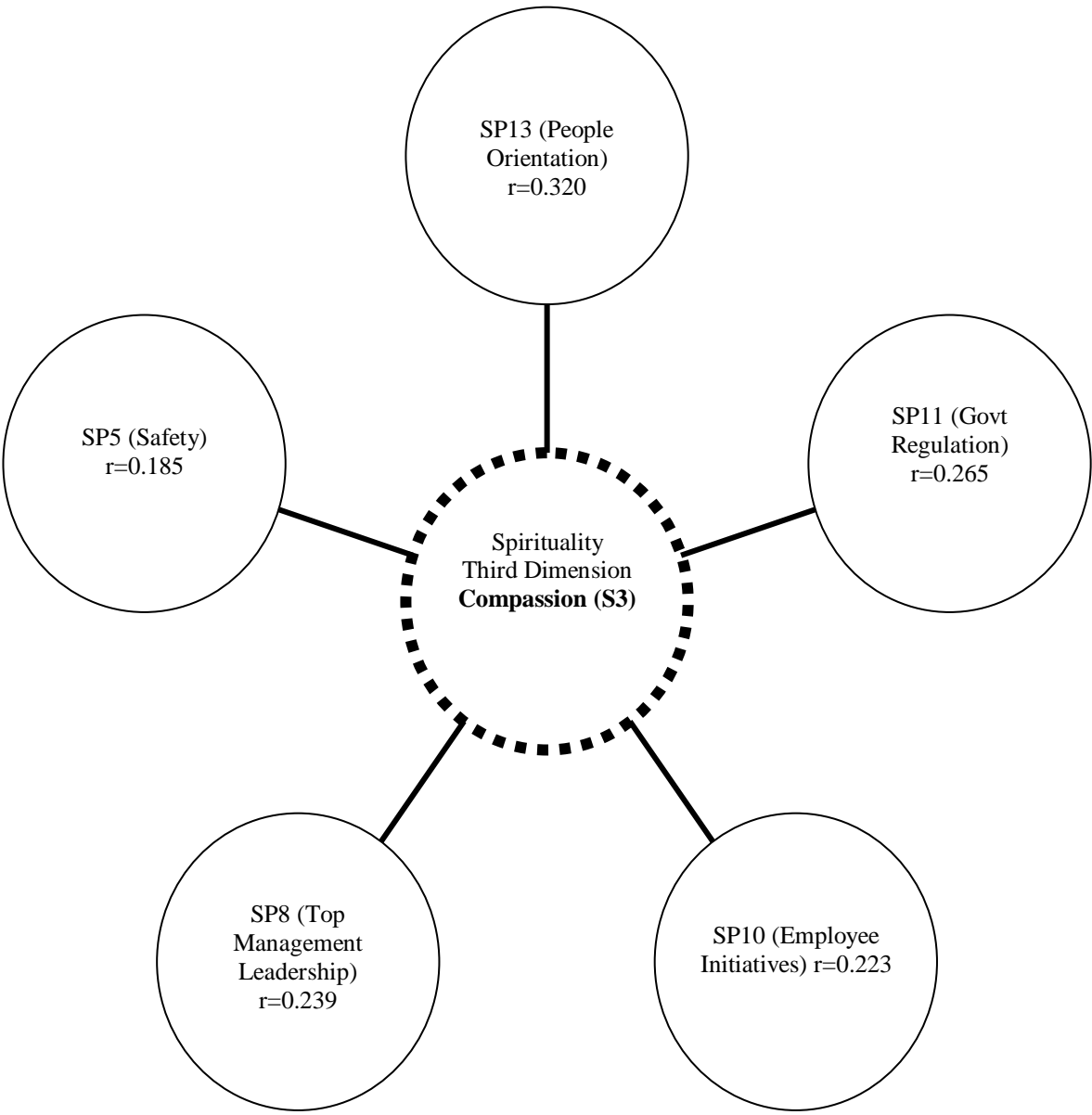
Figure 4.2: Relationship between the Second Dimension of Spirituality with Sustainable Procurement Dimensions



Source: Author

Dimension three of spirituality (Compassion) is correlated with SP5 (Safety, $r=0.185$, $p=0.005$), SP8 (Top management leadership, $r=0.239$, $p=0.000$), SP10 (Employee initiatives, $r=0.223$, $p=0.001$), SP11 (Govt regulation, $r=0.265$, $p=0.000$) and SP13 (People orientation, $r=0.320$, $p=0.000$).

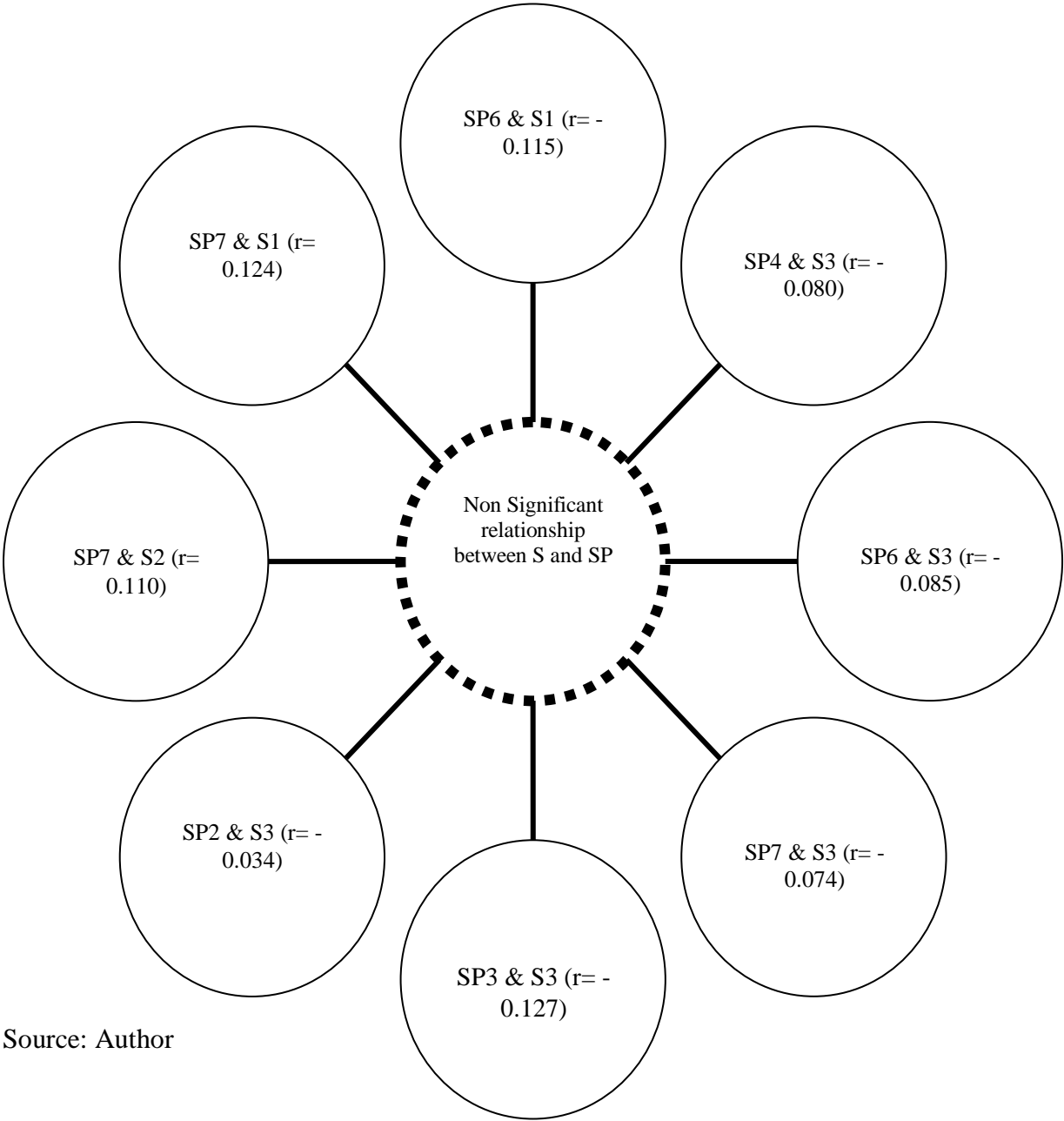
Figure 4.3: Relationships between the Third Dimension of Spirituality with Sustainable Procurement Dimensions



Source: Author

A few dimensions between spirituality and sustainable procurement do not share any relationship (Figure 4.4). The dimensions S6 and S1 (Ethics-D and Larger context); SP7 and S1 (Ethics-S and Larger context); SP7 & S2 (Ethics-S and Awareness of life); SP2 and S3 (Diversity and Compassion); SP3 and S3 (Human rights and Compassion); SP7 and S3 (Ethics-S and Compassion); SP6 and S3 (Ethics-D and Compassion); and SP4 and S3 (Philanthropy and Compassion) have non-significant relationships.

Figure 4.4: Non-significant Relationships between the Dimensions of Spirituality and Sustainable Procurement



Source: Author

Negative relationship: There is also a negative relationship between SP6 and S2 (Ethics-Deceitful practices and Awareness of life: $r=-0.151$, $p=0.024$).

Summary: This section presented the Pearson correlation for the relationship between the dimensions of spirituality and sustainable procurement. The correlation analysis confirms that there are some positive relationships between spirituality and sustainable procurement. There is also a negative relationship between spirituality and sustainable procurement.

Table 4.10 on the following page is the correlation matrix for the spirituality and sustainable procurement relationship.

Table 4.10: Correlation matrix between the dimensions of spirituality and the dimensions of sustainable procurement

| | | S1 | S2 | S3 | SP1 | SP2 | SP3 | SP4 | SP5 | SP6 | SP7 | SP8 | SP9 | SP10 | SP11 | SP12 | SP13 |
|------|---------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------------|---------------------|--------------------|--------------------|--------------------|--------------------|--------------------|------|
| S1 | Pearson Correlation | 1 | | | | | | | | | | | | | | | |
| | Sig. (2-tailed) | | | | | | | | | | | | | | | | |
| | N | 224 | | | | | | | | | | | | | | | |
| S2 | Pearson Correlation | .653 ^{**} | 1 | | | | | | | | | | | | | | |
| | Sig. (2-tailed) | .000 | | | | | | | | | | | | | | | |
| | N | 224 | 224 | | | | | | | | | | | | | | |
| S3 | Pearson Correlation | .642 ^{**} | .527 ^{**} | 1 | | | | | | | | | | | | | |
| | Sig. (2-tailed) | .000 | .000 | | | | | | | | | | | | | | |
| | N | 224 | 224 | 224 | | | | | | | | | | | | | |
| SP1 | Pearson Correlation | .342 ^{**} | .526 ^{**} | .166 [*] | 1 | | | | | | | | | | | | |
| | Sig. (2-tailed) | .000 | .000 | .013 | | | | | | | | | | | | | |
| | N | 223 | 223 | 223 | 223 | | | | | | | | | | | | |
| SP2 | Pearson Correlation | .153 [*] | .234 ^{**} | .034 | .350 ^{**} | 1 | | | | | | | | | | | |
| | Sig. (2-tailed) | .022 | .000 | .608 | .000 | | | | | | | | | | | | |
| | N | 224 | 224 | 224 | 223 | 224 | | | | | | | | | | | |
| SP3 | Pearson Correlation | .243 ^{**} | .276 ^{**} | .127 | .411 ^{**} | .452 ^{**} | 1 | | | | | | | | | | |
| | Sig. (2-tailed) | .000 | .000 | .059 | .000 | .000 | | | | | | | | | | | |
| | N | 224 | 224 | 224 | 223 | 224 | 224 | | | | | | | | | | |
| SP4 | Pearson Correlation | .200 ^{**} | .422 ^{**} | .080 | .684 ^{**} | .397 ^{**} | .487 ^{**} | 1 | | | | | | | | | |
| | Sig. (2-tailed) | .003 | .000 | .234 | .000 | .000 | .000 | | | | | | | | | | |
| | N | 224 | 224 | 224 | 223 | 224 | 224 | 224 | | | | | | | | | |
| SP5 | Pearson Correlation | .314 ^{**} | .456 ^{**} | .185 ^{**} | .622 ^{**} | .311 ^{**} | .499 ^{**} | .782 ^{**} | 1 | | | | | | | | |
| | Sig. (2-tailed) | .000 | .000 | .005 | .000 | .000 | .000 | .000 | | | | | | | | | |
| | N | 224 | 224 | 224 | 223 | 224 | 224 | 224 | 224 | | | | | | | | |
| SP6 | Pearson Correlation | -.115 | -.151 [*] | -.085 | -.157 [*] | .124 | -.016 | -.058 | -.100 | 1 | | | | | | | |
| | Sig. (2-tailed) | .086 | .024 | .203 | .019 | .064 | .815 | .390 | .135 | | | | | | | | |
| | N | 224 | 224 | 224 | 223 | 224 | 224 | 224 | 224 | 224 | | | | | | | |
| SP7 | Pearson Correlation | -.124 | -.110 | -.074 | -.064 | .069 | .009 | -.003 | -.144 [*] | .563 ^{**} | 1 | | | | | | |
| | Sig. (2-tailed) | .063 | .101 | .271 | .338 | .304 | .894 | .970 | .031 | .000 | | | | | | | |
| | N | 224 | 224 | 224 | 223 | 224 | 224 | 224 | 224 | 224 | 224 | | | | | | |
| SP8 | Pearson Correlation | .325 ^{**} | .456 ^{**} | .239 ^{**} | .598 ^{**} | .333 ^{**} | .408 ^{**} | .597 ^{**} | .551 ^{**} | -.152 [*] | -.158 [*] | 1 | | | | | |
| | Sig. (2-tailed) | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .022 | .018 | | | | | | |
| | N | 224 | 224 | 224 | 223 | 224 | 224 | 224 | 224 | 224 | 224 | 224 | | | | | |
| SP9 | Pearson Correlation | .305 ^{**} | .460 ^{**} | .156 [*] | .667 ^{**} | .310 ^{**} | .408 ^{**} | .637 ^{**} | .568 ^{**} | -.106 | -.093 | .749 ^{**} | 1 | | | | |
| | Sig. (2-tailed) | .000 | .000 | .019 | .000 | .000 | .000 | .000 | .000 | .114 | .165 | .000 | | | | | |
| | N | 224 | 224 | 224 | 223 | 224 | 224 | 224 | 224 | 224 | 224 | 224 | 224 | | | | |
| SP10 | Pearson Correlation | .364 ^{**} | .335 ^{**} | .223 ^{**} | .403 ^{**} | .213 ^{**} | .371 ^{**} | .491 ^{**} | .483 ^{**} | -.104 | -.065 | .514 ^{**} | .627 ^{**} | 1 | | | |
| | Sig. (2-tailed) | .000 | .000 | .001 | .000 | .001 | .000 | .000 | .000 | .120 | .330 | .000 | .000 | | | | |
| | N | 224 | 224 | 224 | 223 | 224 | 224 | 224 | 224 | 224 | 224 | 224 | 224 | 224 | | | |
| SP11 | Pearson Correlation | .418 ^{**} | .421 ^{**} | .265 ^{**} | .512 ^{**} | .211 ^{**} | .400 ^{**} | .608 ^{**} | .548 ^{**} | -.021 | -.060 | .584 ^{**} | .640 ^{**} | .608 ^{**} | 1 | | |
| | Sig. (2-tailed) | .000 | .000 | .000 | .000 | .001 | .000 | .000 | .000 | .752 | .372 | .000 | .000 | .000 | | | |
| | N | 224 | 224 | 224 | 223 | 224 | 224 | 224 | 224 | 224 | 224 | 224 | 224 | 224 | 224 | | |
| SP12 | Pearson Correlation | .316 ^{**} | .343 ^{**} | .145 [*] | .378 ^{**} | .139 [*] | .256 ^{**} | .387 ^{**} | .421 ^{**} | -.166 [*] | -.191 ^{**} | .422 ^{**} | .437 ^{**} | .445 ^{**} | .421 ^{**} | 1 | |
| | Sig. (2-tailed) | .000 | .000 | .030 | .000 | .038 | .000 | .000 | .000 | .013 | .004 | .000 | .000 | .000 | .000 | | |
| | N | 224 | 224 | 224 | 223 | 224 | 224 | 224 | 224 | 224 | 224 | 224 | 224 | 224 | 224 | 224 | |
| SP13 | Pearson Correlation | .297 ^{**} | .386 ^{**} | .320 ^{**} | .405 ^{**} | .111 | .206 ^{**} | .385 ^{**} | .484 ^{**} | -.208 ^{**} | -.230 ^{**} | .494 ^{**} | .397 ^{**} | .416 ^{**} | .383 ^{**} | .436 ^{**} | 1 |
| | Sig. (2-tailed) | .000 | .000 | .000 | .000 | .099 | .002 | .000 | .000 | .002 | .001 | .000 | .000 | .000 | .000 | .000 | |
| | N | 224 | 224 | 224 | 223 | 224 | 224 | 224 | 224 | 224 | 224 | 224 | 224 | 224 | 224 | 224 | 224 |

** Correlation is significant at the 0.01 level (2-tailed).

Source: Author

* Correlation is significant at the 0.05 level (2-tailed).

4.8: Mean Scores of the Dimensions of Spirituality and Sustainable Procurement

This section contains the mean score and standard deviation for the dimensions of spirituality and sustainable procurement. Table 4.11 below shows that the mean score of the three dimensions of spirituality range between 3.79 and 4.02 where the mean value for ‘compassion’ is 4.02. Similarly, for sustainable procurement, the mean score ranges from 1.99 to 4.31 where the highest mean score is 4.31 of Philanthropy and the lowest mean score is 1.90 of Ethics-Subtle practices.

Table 4.11: Mean Scores of the Dimensions of Spirituality and Sustainable Procurement

| Dimensions | N | Mean | Std. Deviation |
|------------------------------------|-----|--------|----------------|
| S1(Larger context) | 224 | 3.9173 | .49670 |
| S2(Awareness of life) | 224 | 3.7976 | .66059 |
| S3(Compassion) | 224 | 4.0287 | .46769 |
| SP1(Environment) | 224 | 4.0131 | .82102 |
| SP2(Diversity) | 224 | 2.6629 | .74359 |
| SP3(Human rights) | 224 | 3.2068 | .97202 |
| SP4(Philanthropy) | 224 | 4.3125 | .87230 |
| SP5(Safety) | 224 | 4.2366 | .84163 |
| SP6(Ethics—Deceitful practices) | 224 | 1.9907 | .55024 |
| SP7(Ethics—Subtle practices) | 224 | 1.9048 | .66880 |
| SP8(Top management leadership) | 224 | 3.9821 | .73267 |
| SP9(Customer pressure) | 224 | 3.9315 | .71309 |
| SP10(Employee initiatives) | 224 | 3.9844 | .63244 |
| SP11(Government regulation) | 224 | 3.9315 | .68530 |
| SP12(Individual values) | 224 | 3.9710 | .48027 |
| SP13(People oriented Org. culture) | 224 | 3.8136 | .62963 |
| Valid N | 224 | | |

The mean scores of the three dimensions of spirituality vary between 3.79 to 4.02, thus there is no significant difference between the dimensions of spirituality on the mean scores. The mean scores of the 13 dimensions of spirituality vary between 1.90 to 4.23 where SP1 (Environment), SP4 (Philanthropy) and SP5 (Safety) have 4 and above mean scores. The average responses of these three dimensions are 'agree' where as the dimensions SP3, SP8, SP9, SP10, SP11, SP12 and SP 13 have scores 3 and above. This reflects that these responses are rated as neutral. On the other hand SP2 dimension has a mean score of 2.66 and SP6 (1.99) and SP7 (1.90) are below two which is disagree. The dimension Ethics-deceitful practices (SP6) is a negative item.

The following section answers the thesis's research questions and further investigates the relationship between spirituality and sustainable procurement with the demographic factors of the procurement professionals.

4.9: Data Analysis

4.9.1: Relationship between Age, Spirituality and Sustainable Procurement

The aim of this section is to analyse the research question: 'Is there a relationship between the age of procurement professionals, spirituality and sustainable procurement?' This research question investigates whether the age of procurement professionals working in the Australian higher education sector has a correlation with spirituality and sustainability procurement.

The Pearson correlation measures the degree and the direction of the linear relationship between the age of procurement professionals and spirituality and sustainability

procurement. It investigates the strength and direction of the relationship between the two variables. Correlation is a statistical technique that is used to measure and describe a relationship between two variables. Correlation measures three characteristics of the relationship between the variables which is the direction of the relationship, the form of the relationship, and the degree of the relationship (Gravetter & Wallnau, 2004).

Table 4.12 below shows that there is no significant relationship between the age of procurement professionals, spirituality and sustainable procurement.

Table 4.12: Relationship between Age, Spirituality and Sustainable Procurement

| Age | S | SP |
|---------------------|------|------|
| Pearson correlation | .082 | .069 |
| Sig. (2-tailed) | .230 | .309 |
| N | 224 | 224 |

4.9.2: Relationship between Spirituality and Sustainable Procurement within the Different Age Categories of Procurement Professionals

This section presents the analysis of the relationship between spirituality and sustainable procurement within the five different age categories of procurement professionals. This analyses the research question: ‘Is there a relationship between spirituality and sustainable procurement within different age categories of procurement professionals?’

This correlation analysis provides an insight into the relationship between spirituality and sustainable procurement within the different age categories of procurement professionals. The different age categories are 15–25 years, 26–35 years, 36–50 years, 51–60 years and 61 years and above.

Table 4.13 below shows that there is a significant relationship between spirituality and sustainable procurement in three age categories of procurement professionals which are 26–35 years ($r = 0.661$, $p = 0.000$), 51–60 years ($r = 0.498$, $p = 0.000$) and 61 years and above of age ($r = 0.661$, $p = 0.000$).

Table 4.13: Relationship between Spirituality and Sustainable Procurement within Age Categories

| Age categories | | | S |
|----------------|----|---------------------|--------|
| 26-35 | SP | Pearson correlation | .661** |
| | | Sig. (2-tailed) | .000 |
| | | N | 33 |
| 36-50 | SP | Pearson correlation | .138 |
| | | Sig. (2-tailed) | .274 |
| | | N | 65 |
| 51-60 | SP | Pearson correlation | .498** |
| | | Sig. (2-tailed) | .000 |
| | | N | 85 |
| 61-above | SP | Pearson correlation | .661** |
| | | Sig. (2-tailed) | .000 |
| | | N | 33 |

4.9.3: Difference in the Perception of Spirituality and Sustainable Procurement within the Different Age Categories of Procurement Professionals

The aim of this section is to analyse the research question: ‘Is there a difference in the perception of spirituality and sustainable procurement within the different age categories of procurement professionals?’

One-way analysis of variance (ANOVA) is conducted to compare the variance between the mean score of spirituality and sustainable procurement across different age brackets of procurement professionals.

The homogeneity of variance tests whether the variance within each of the population groups is equal or not. If the variances are not homogeneous, they are said to be heterogeneous. In this test (table 4.14), it is noticed that the Sig. value for spirituality is 0.048 and sustainable procurement is 0.115. This means that spirituality has violated the assumption of homogeneity of variance and that sustainable procurement has not violated the assumption of homogeneity of variance (Pallant, 2009).

Table 4.14: Test of Homogeneity of Variances between Age Categories

| | Levene Statistic | df1 | df2 | Sig. |
|----|------------------|-----|-----|------|
| S | 2.434 | 4 | 218 | .048 |
| SP | 1.880 | 4 | 218 | .115 |

Table 4.15 below contains an analysis of variance (ANOVA) that assesses the overall significance. As the value of F for spirituality is >1 at 3.658 and the p-value is < 0.05 at .003, this predicts that there is a highly significant difference in the perception of spirituality across different age brackets of procurement professionals. Similarly, the F value for sustainable procurement is >1 at 2.054 and the p-value is $>$ than 0.05 which is 0.072 showing that there is no significant difference in the perception of sustainable procurement across different age groups of procurement professionals.

Post-hoc tests (Table 4.16) confirm that there is a significant difference ($p=0.007$) in the perception of spirituality across procurement professionals within the age of 51–60 years.

Table 4.15: One-Way Analysis of Variance across Age Categories

| | | Sum of Squares | df | Mean Square | F | Sig. |
|----|----------------|----------------|-----|-------------|-------|------|
| S | Between groups | 3.553 | 5 | .711 | 3.658 | .003 |
| | Within groups | 42.346 | 219 | .194 | | |
| | Total | 45.898 | 224 | | | |
| SP | Between Groups | 1.987 | 5 | .397 | 2.054 | .072 |
| | Within groups | 42.162 | 219 | .193 | | |
| | Total | 44.149 | 224 | | | |

Table 4.16: Post-hoc Test between Different Age Categories

| Dependent variable | (I) Age Bracket | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
|--------------------|-----------------|-----------------------|------------|------|-------------------------|-------------|
| | | | | | Lower Bound | Upper Bound |
| S | 26–35 | -.23966 | .09296 | .051 | -.4804 | .0011 |
| | | -.29224* | .08920 | .007 | -.5232 | -.0613 |
| | | -.10412 | .10706 | .765 | -.3814 | .1731 |
| | 36–50 | .23966 | .09296 | .051 | -.0011 | .4804 |
| | | -.05258 | .07166 | .883 | -.2381 | .1330 |
| | | .13554 | .09296 | .465 | -.1052 | .3763 |
| | 51–60 | .29224* | .08920 | .007 | .0613 | .5232 |
| | | .05258 | .07166 | .883 | -.1330 | .2381 |
| | | .18812 | .08920 | .154 | -.0429 | .4191 |
| | 61–ABOVE | .10412 | .10706 | .765 | -.1731 | .3814 |
| | | -.13554 | .09296 | .465 | -.3763 | .1052 |
| | | -.18812 | .08920 | .154 | -.4191 | .0429 |

Summary: The result confirms that there is no significant relationship between the age of procurement professionals, spirituality and sustainable procurement and there is a significant relationship between spirituality and sustainable procurement within three age categories of procurement professionals which are 26–35 years ($r = 0.661$, $p = 0.000$), 51–60 years ($r = 0.498$, $p = 0.000$) and 61 and above years of age ($r = 0.661$, $p = 0.000$). However, no correlation was found between spirituality and sustainable procurement within the 36–50 year age bracket of procurement professionals. There is no negative correlation found between spirituality and sustainable procurement within five age

brackets. Also, there is a significant difference in the perception of spirituality across procurement professionals within the age bracket of 51–60 years. There is also no significant difference found in the perception of sustainable procurement across different age brackets of procurement professionals.

4.9.4: Relationship between Gender, Spirituality and Sustainable Procurement

The aim of this section is to investigate the relationship between the gender of procurement professionals, spirituality and sustainable procurement.

The relationship between spirituality, sustainable procurement and the gender of procurement professionals working in the Australian higher education sector is investigated using the Pearson product-moment correlation coefficient. The correlation analysis in Table 4.17 below shows that there is a highly significant correlation ($r=0.207$, $p=.002$) between spirituality and the gender of procurement professionals. On the other hand, there is no correlation between gender and sustainable procurement.

Table 4.17: Relationship between Gender, Spirituality and Sustainable Procurement

| Gender | S | SP |
|---------------------|--------|------|
| Pearson correlation | .207** | .128 |
| Sig. (2-tailed) | .002 | .062 |
| N | 224 | 224 |

4.9.5: Relationship between Spirituality and Sustainable Procurement within Male and Female Procurement Professionals

This section investigates the research question: ‘Is there a relationship between spirituality and sustainable procurement within male and female procurement professionals?’ The correlation table below (Table 4.18) informs the relationship between spirituality and sustainable procurement within the male and female procurement professionals. It also confirms that there is a highly significant relationship between spirituality and sustainable procurement between the male procurement professionals ($r=0.478$, $p=0.000$) and the female procurement professionals ($r=0.343$, $p=0.000$).

Table 4.18: Relationship between Spirituality and Sustainable Procurement within Gender

| Gender | | S |
|-----------|---------------------|--------|
| Male SP | Pearson correlation | .478** |
| | Sig. (2-tailed) | .000 |
| | N | 92 |
| Female SP | Pearson correlation | .343** |
| | Sig. (2-tailed) | .000 |
| | N | 123 |

4.9.6: Difference in the Perception of Spirituality and Sustainable Procurement within the Male and Female Procurement Professionals

This section investigates the research question: ‘Is there a difference in the perception of spirituality and sustainable procurement within the male and female procurement professionals?’

An independent sample t-test was conducted to compare the difference in the perception of spirituality and sustainable procurement of male procurement professionals and female procurement professionals working in the Australian higher education sector. If the Sig. value is larger than or equal to 0.05 then, the first line in the table is referred to, which is 'Equal variance assumed'. If the Sig. value is less than or equal to 0.05, then the second line is assumed 'Equal variance not assumed'.

In this case, as shown in Table 4.19 below, the Sig. value for spirituality is 0.16 and for sustainable procurement is 0.023. This means that the variance for two groups is not the same. Therefore, the data violates the assumption of equal variance. The Sig (2-tailed) value for spirituality is 0.02 which is less than 0.05. This means that there is a significant difference in the mean scores of male and female procurement professionals. The Sig (2-tailed) value for sustainable procurement is 0.071, which is above 0.05. This means that there is no significant difference between the male and female procurement professionals.

Table 4.19: Independent Sample t-test: Difference between Male and Female Procurement Professionals towards the Perception of Spirituality

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|----|--------------------------------|---|------|------------------------------|---------|------------------------|--------------------|--------------------------|---|---------|
| | | F | Sig. | T | df | Sig. (2- tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference | |
| | | | | | | | | | Lower | Upper |
| S | Equal variances assumed | 5.923 | .016 | -3.081 | 213 | .002 | -.18645 | .06053 | -.30576 | -.06715 |
| | Equal variances not assumed | | | -2.976 | 167.558 | .003 | -.18645 | .06265 | -.31014 | -.06276 |
| SP | Equal variances assumed | 5.252 | .023 | -1.878 | 213 | .062 | -.11494 | .06120 | -.23557 | -.00569 |
| | Equal variances not assumed | | | -1.814 | 167.451 | .071 | -.11494 | .06336 | -.24002 | -.01014 |

Summary: There is a highly significant correlation between the perception of spirituality and the gender of procurement professionals. On the other hand, there is no correlation between the gender of procurement professionals and sustainable procurement. There is a highly significant correlation between spirituality and sustainable procurement within both the male and female procurement professionals. Results also confirmed that there is a significant difference in the male and female procurement professionals in their perceptions of spirituality. However, there is no significant difference in the male and female procurement professionals' perceptions of sustainable procurement.

4.9.7: Relationship between Educational Qualification, Spirituality and Sustainable Procurement

This section investigates the research question: 'Is there a relationship between the educational qualification of procurement professionals and spirituality and sustainable procurement?'

The correlation between spirituality and sustainable procurement and the educational qualification of procurement professionals working in the Australian higher education sector is investigated using the Pearson product-moment correlation coefficient. Preliminary analysis was performed to ensure that no violation of the assumptions of normality, linearity and homoscedasticity existed. Table 4.20 below confirms that there is a highly significant negative correlation found between the educational qualification of procurement professionals and spirituality ($r=-.306$, $p=0.00$, $n=223$) and sustainable procurement ($r=-.246$, $p=0.00$, $n=223$) and qualification.

Table 4.20: Relationship between Spirituality, Sustainable Procurement and Qualification

| Qualification | S | SP |
|---------------------|---------|---------|
| Pearson correlation | -.306** | -.246** |
| Sig. (2-tailed) | .000 | .000 |
| N | 224 | 224 |

4.9.8: Relationship between Spirituality and Sustainable Procurement within the Different Levels of Educational Qualification of Procurement Professionals

This section investigates the research question: ‘Is there a relationship between spirituality and sustainable procurement within the different levels of educational qualification of procurement professionals?’

Table 4.21 below shows that there is a significant relationship between spirituality and sustainable procurement within the different levels of educational qualification of procurement professionals. Results confirm that there is a highly significant relationship between spirituality and sustainable procurement between the bachelors ($r=0.544$, $p=0.000$) and diploma qualification ($r=.332$, $p=0.02$) of procurement professionals. There is also a relationship between spirituality and sustainable procurement within the master’s qualification ($r=.272$, $p=0.35$) of procurement professionals. Table 4.21 below also confirms that there is no relationship between spirituality and sustainable procurement within the procurement professionals who hold PhD qualifications.

[continues on following page]

Table 4.21: Relationship between Spirituality and Sustainable Procurement within Different Levels of Educational Qualification

| Qualification | | | S |
|---------------|----|---------------------|--------|
| PhD | SP | Pearson correlation | .592 |
| | | Sig. (2-tailed) | .408 |
| | | N | 4 |
| Masters | SP | Pearson correlation | .272* |
| | | Sig. (2-tailed) | .035 |
| | | N | 60 |
| Bachelors | SP | Pearson correlation | .544** |
| | | Sig. (2-tailed) | .000 |
| | | N | 102 |
| Diploma | SP | Pearson correlation | .332* |
| | | Sig. (2-tailed) | .020 |
| | | N | 49 |
| TAFE | SP | Pearson correlation | .372 |
| | | Sig. (2-tailed) | .538 |
| | | N | 5 |

4.9.9: Difference in the Perception of Spirituality and Sustainable Procurement within the Different Levels of Educational Qualification of Procurement Professionals

The aim of this section is to investigate the research question: ‘Is there a difference in the perception of spirituality and sustainable procurement within the different levels of educational qualification of procurement professionals?’

One-way analysis of variance (ANOVA) is conducted to compare the variance between the mean score of spirituality and sustainable procurement across seven different levels of educational qualification. The test of homogeneity of variance tests whether the variance within each of the populations is equal or not. If the variances are not homogeneous, they are said to be heterogeneous. Table 4.22 below informs that the Sig. value for spirituality is 0.290 and the Sig. value for sustainable procurement is 0.015. This means that spirituality has not violated the assumption of homogeneity of variance and that

sustainable procurement has violated the assumption of homogeneity of variance (Pallant 2009).

Table 4.23 below contains an analysis of variance (ANOVA) which assesses the overall significance. As the value of F for spirituality is >1 at 6.768 and the p-value is <0.05 at 0.000 and the value of F for sustainable procurement is >1 at 4.884 and the p-value is <0.05 at 0.000, this predicts that there is a highly significant difference in the perception of spirituality and sustainable procurement of procurement professionals working in the Australian higher education sector within the seven different levels of educational qualification. Furthermore, post-hoc comparisons using the Tukey HSD test indicated that (Table 4.24) there is a significant difference ($p=0.003$) in the perception of spirituality of procurement professionals with TAFE qualification, whereas post-hoc comparisons indicate that there is no difference in the perception of sustainable procurement.

Table 4.22: Test of Homogeneity of Variances between Educational Qualifications

| | Levene statistic | df1 | df2 | Sig. |
|----|--------------------|-----|-----|------|
| S | 1.243 ^a | 5 | 216 | .290 |
| SP | 2.876 ^b | 5 | 216 | .015 |

Table 4.23: One-Way Analysis of Variance across Different Categories of Educational Qualification

| | | Sum of Squares | df | Mean Square | F | Sig. |
|----|----------------|----------------|-----|-------------|-------|------|
| S | Between groups | 7.235 | 8 | 1.206 | 6.768 | .000 |
| | Within groups | 38.484 | 216 | .178 | | |
| | Total | 45.719 | 224 | | | |
| SP | Between groups | 5.263 | 8 | .877 | 4.884 | .000 |
| | Within groups | 38.792 | 216 | .180 | | |
| | TOTAL | 44.055 | 224 | | | |

Table 4.24: Post-Hoc Test between Different Categories of Educational Qualification

| Dependent Variable Qualification (j) | Qualification (j) | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
|--------------------------------------|-------------------|-----------------------|------------|-------|-------------------------|-------------|
| | | | | | Lower Bound | Upper Bound |
| S PhD | Masters | -.01351 | .21734 | 1.000 | -.6385 | .6114 |
| | Bachelors | .19457 | .21452 | .944 | -.4223 | .8114 |
| | Diploma | .27833 | .21885 | .800 | -.3510 | .9076 |
| | TAFE | 1.06000* | .28233 | .003 | .2482 | 1.8718 |
| | Secondary | .67500 | .36448 | .435 | -.3731 | 1.7231 |
| SP PhD | Masters | -.36625 | .21946 | .554 | -.9973 | .2648 |
| | Bachelors | -.32811 | .21662 | .655 | -.9510 | .2948 |
| | Diploma | -.17379 | .22100 | .970 | -.8093 | .4617 |
| | TAFE | .27453 | .28509 | .929 | -.5452 | 1.0943 |
| | Secondary | .43023 | .36805 | .851 | -.6281 | 1.4886 |

*, The mean difference is significant at the 0.05 level.

Summary: Results confirm that there is a highly significant negative correlation found between the educational qualification of procurement professionals and spirituality and sustainable procurement. There is a relationship between spirituality and sustainable procurement within the Bachelor Degree, Master Degree and the Diploma qualification of procurement professionals. There is no relationship between spirituality and sustainable procurement within the procurement professionals who hold a PhD qualification. There is also a significant difference in the perception of spirituality with TAFE qualification procurement professionals and no difference in the perception of sustainable procurement.

4.9.10: Relationship between Annual Purchasing Expenditure, Spirituality and Sustainable Procurement

This section investigates whether the annual purchasing expenditure of procurement professionals working in the Australian higher education sector has any correlation with spirituality and sustainability procurement. Correlation analysis, as indicated in Table

4.25 below, shows that there is no correlation between annual purchasing expenditure, spirituality and sustainable procurement.

Table 4.25: Relationship between Annual Purchasing Expenditure, Spirituality and Sustainable Procurement

| Annual purchasing expenditure | S | SP |
|-------------------------------|-------|------|
| Pearson correlation | -.015 | .104 |
| Sig. (2-tailed) | .828 | .126 |
| N | 224 | 224 |

4.9.11: Relationship between Spirituality and Sustainable Procurement within the Different Categories of Annual Purchasing Expenditure among Procurement Professionals

This section investigates the research question: ‘Is there a relationship between spirituality and sustainable procurement within different categories of annual purchasing expenditure among procurement professionals?’

The correlation analysis is conducted to investigate the relationship between spirituality and sustainable procurement within the different levels of annual purchasing expenditure. The five different categories of annual purchasing expenditures are AUD\$1–25,000; \$25,001–50,000; \$50,001–75,000; \$75,001–100,000; and \$100,000 and above.

Table 4.26 below confirms that there is a highly significant relationship between spirituality and sustainable procurement within the group of procurement professionals with the annual purchasing expenditure of AUD\$100,000 and above. There is no relationship between spirituality and sustainable procurement within the group of procurement professionals who have an annual purchasing expenditure between AUD\$1–

25,000; \$25,001–50,000; \$50,001–75,000; and \$75,001–100,000. Thus, there is a highly significant correlation found between spirituality and sustainable procurement within the procurement professionals who have higher purchasing expenditure.

Table 4.26: Relationship between Annual Purchasing Expenditure, Spirituality and Sustainable Procurement

| Annual purchasing expenditure in the role (AUD) | | | S |
|---|----|---------------------|--------|
| 1–25,000 | SP | Pearson correlation | -.192 |
| | | Sig. (2-tailed) | .808 |
| | | N | 4 |
| 25,001–50,000 | SP | Pearson correlation | .346 |
| | | Sig. (2-tailed) | .246 |
| | | N | 13 |
| 50,001–75,000 | SP | Pearson correlation | .437 |
| | | Sig. (2-tailed) | .061 |
| | | N | 19 |
| 75,001–100,000 | SP | Pearson correlation | .348 |
| | | Sig. (2-tailed) | .055 |
| | | N | 31 |
| 100,000–above | SP | Pearson correlation | .593** |
| | | Sig. (2-tailed) | .000 |
| | | N | 151 |

4.9.12: Difference in the perception of Spirituality and Sustainable Procurement within the Different Categories Annual Purchasing Expenditure of Procurement Professionals

This section investigates the research question: ‘Is there a difference in the perception of spirituality and sustainable procurement within the different categories ‘annual purchasing expenditure’ of procurement professionals?’

One-way analysis of variance (ANOVA) is conducted in Table 4.28 below to compare the variance between the mean score of spirituality and sustainable procurement across the five different purchasing expenditures. The five different purchasing expenditure groups are ‘AUD\$1–25,000; \$25,001–50,000; \$50,001–75,000; \$75,001–100,000; and \$100,000 and above’. The test of homogeneity of variance tests whether the variance

within each of the populations is equal or not. If the variances are not homogeneous, they are said to be heterogeneous. In the Levene's test (Table 4.27), it is shown that the Sig. value for spirituality is 0.647 and sustainable procurement is 0.597 which means that there is no violation of homogeneity of variance between spirituality and sustainable procurement (Pallant 2009).

Table 4.28 below contains an analysis of variance (ANOVA) which assesses the overall significance. As the value of F for spirituality is <1 at 0.810 and the p-value is > 0.05 at 0.543, there is no significant difference in the perception of spirituality of procurement professionals working in the Australian higher education sector across five different categories of annual purchasing expenditure. The F value for sustainable procurement is <1 at 2.315 and the p-value is <0.05 at 0.045 which shows that there is a difference in the perception of sustainable procurement among procurement professionals across different categories of annual purchasing expenditure. However, Post-hoc comparisons using the Tukey HSD (Table 4.29) test did not indicate the difference between the groups.

Table 4.27: Test of Homogeneity of Variances between Annual Purchasing Expenditure

| | Levene Statistic | df1 | df2 | Sig. |
|----|------------------|-----|-----|------|
| S | .669 | 5 | 224 | .647 |
| SP | .737 | 5 | 224 | .597 |

Table 4.28: One-Way Analysis of Variance across Annual Purchasing Expenditure

| | | Sum of Squares | df | Mean Square | F | Sig. |
|----|----------------|----------------|-----|-------------|-------|------|
| S | Between groups | .837 | 6 | .167 | .810 | .543 |
| | Within groups | 45.061 | 218 | .207 | | |
| | Total | 45.898 | 224 | | | |
| SP | Between groups | 2.226 | 6 | .445 | 2.315 | .045 |
| | Within groups | 41.923 | 218 | .192 | | |
| | Total | 44.149 | 224 | | | |

Table 4.29: Post-Hoc Test between Different Categories of Annual Purchasing Expenditure

| Dependent Variable Annual purchase expenditure in this role (j) | Annual purchase expenditure in this role (j) | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
|--|--|-----------------------|------------|--------|-------------------------|-------------|
| | | | | | Lower Bound | Upper Bound |
| S 1-25,000AUD | 25,001–50,000 | .11888 | .25938 | .25938 | -.5948 | .8325 |
| | 50,001–75,000 | .03750 | .24956 | .24956 | -.6491 | .7241 |
| | 75,001–100,000 | .00596 | .24101 | .24101 | -.6571 | .6691 |
| | 100,000–above | .08382 | .22981 | .22981 | -.5484 | .7161 |
| SP 1-25,000AUD | 25,001–50,000 | -.43244 | .24771 | .408 | -1.1140 | .2491 |
| | 50,001–75,000 | -.52361 | .23833 | .185 | -1.1793 | .1321 |
| | 75,001–100,000 | -.43102 | .23017 | .335 | -1.0643 | .2022 |
| | 100,000–above | -.50630 | .21947 | .147 | -1.1101 | .0975 |

Summary: The result confirms that there is no relationship between annual purchasing expenditure, spirituality and sustainable procurement. The result also confirms that the relationship between spirituality and sustainable procurement is highly significant within the procurement professionals who have the higher purchasing expenditure of AUD\$100,000. There is a no significant difference found in the perception of spirituality and sustainable procurement of procurement professionals working in the Australian higher education sector across five different categories of annual purchasing expenditure.

4.9.13: Relationship between Position, Spirituality and Sustainable Procurement

This section investigates the research question: ‘Is there any relationship between the position of procurement professionals and spirituality and sustainable procurement?’

The relationship between spirituality, sustainable procurement and the position of procurement professionals working in the Australian higher education sector is investigated using the Pearson product-moment correlation coefficient. Preliminary analysis was performed to ensure that no violation of the assumptions of normality, linearity and homoscedasticity occurred. In the correlation analysis in Table 4.30 below there is no significant relationship found between the title/position level of procurement professionals and spirituality and sustainable procurement.

Table 4.30: Relationship between Annual Purchasing Expenditure, Spirituality and Sustainable Procurement

| Title/Position | S | SP |
|---------------------|------|------|
| Pearson correlation | .011 | .041 |
| Sig. (2-tailed) | .875 | .567 |
| N | 224 | 224 |

4.9.14: Relationship between Spirituality and Sustainable Procurement within the Different Position Levels of Procurement Professionals

This section answers the research question: ‘Is there a relationship between spirituality and sustainable procurement within the different position levels of procurement professionals?’

The three different levels of position of procurement professionals categorised are top level, middle management and first level. Table 4.31 below confirms that the relationship

between spirituality and sustainable procurement is highly significant between the procurement professionals who are in top level positions such as directors, executive directors and middle management levels such as procurement team leaders and procurement managers. No relationship was found between spirituality and sustainable procurement within the first level of procurement professionals such as procurement administrators.

Table 4.31: Relationship between Position of Procurement Professionals, Spirituality and Sustainable Procurement

| Title/Position | | | S |
|--|----|---------------------|--------|
| High level (Director) | SP | Pearson correlation | .622** |
| | | Sig. (2-tailed) | .000 |
| | | N | 41 |
| Middle management (management, team leader, officer) | SP | Pearson correlation | .312** |
| | | Sig. (2-tailed) | .000 |
| | | N | 131 |
| First level management (admin) | SP | Pearson correlation | .124 |
| | | Sig. (2-tailed) | .572 |
| | | N | 23 |

4.9.15: Difference in the Perception of Spirituality and Sustainable Procurement within the Different Position Levels of Procurement Professionals

This section answers the research question: ‘Is there a difference in the perception of spirituality and sustainable procurement within the different position levels of procurement professionals?’

One-way analysis of variance (ANOVA) is conducted to compare the variance between the mean score of spirituality and sustainable procurement across three different levels of job position (top management, middle management and first level).

Table 4.32 below shows that the Sig. value for spirituality is 0.421 and sustainable procurement is 0.13 which means that spirituality and sustainable procurement have not violated the assumption of homogeneity of variance (Pallant, 2009). The test of homogeneity of variance tests whether the variance within each of the populations is equal or not. If the variances are not homogeneous, they are said to be heterogeneous.

Table 4.33 below contains an analysis of variance (ANOVA) which assesses the overall significance. As the value of F for spirituality is >1 at 1.165 and the p-value is >0.05 at 0.314, there is no significant difference in the perception of spirituality of procurement professionals working in the Australian higher education sector across three different levels of job position (top management, middle management and first level). The F value for sustainable procurement is <1 at .547 and the p-value is >0.05 at 0.580 shows that there is no significant difference in the perception of sustainable procurement of procurement professionals working in the Australian higher education sector across three different levels of job position (top management, middle management and first level).

Table 4.32: Test of Homogeneity of Variances across Position of Procurement Professionals

| | Levene Statistic | df1 | df2 | Sig. |
|----|------------------|-----|-----|------|
| S | .870 | 9 | 215 | .421 |
| SP | 4.425 | 9 | 215 | .013 |

Table 4.33: One-Way Analysis of Variance across Position of Procurement Professionals

| | | Sum of Squares | df | Mean Square | F | Sig. |
|----|----------------|----------------|-----|-------------|-------|------|
| S | Between groups | .380 | 9 | .190 | 1.165 | .314 |
| | Within groups | 31.490 | 215 | .163 | | |
| | Total | 31.870 | 224 | | | |
| SP | Between groups | .218 | 9 | .109 | .547 | .580 |
| | Within groups | 38.455 | 215 | .199 | | |
| | Total | 38.673 | 224 | | | |

Summary: There is no significant relationship between the title/position level of procurement professionals and spirituality and sustainable procurement. The results confirm that the relationship between spirituality and sustainable procurement is highly significant between the procurement professionals who are in top level positions, such as directors and executive directors and the middle management level, such as procurement team leaders and procurement managers. There is no relationship found between spirituality and sustainable procurement within the first level of procurement professionals, such as procurement administrators. There is also no significant difference in the perception of spirituality and sustainable procurement of procurement professionals working in the Australian higher education sector across three different levels of job position (top management, middle management and first level).

4.9.16: Relationship between Working Tenure, Spirituality and Sustainable Procurement

This section investigates the research question: ‘Is there any relationship between the different working tenure/year of working of procurement professionals and spirituality and sustainable procurement?’

The relationship between spirituality, sustainable procurement, and the working tenure of procurement professionals working in the Australian higher education sector is investigated using the Pearson product-moment correlation coefficient. In the correlation analysis, as shown in Table 4.34 below, no significant relationship is found between the working tenure of procurement professional, spirituality and sustainable procurement.

Table 4.34 Relationship between Working Tenure, Spirituality and Sustainable Procurement

| Working in this role (years) | S | SP |
|------------------------------|-------|------|
| Pearson correlation | -.003 | .048 |
| Sig. (2-tailed) | .966 | .477 |
| N | 224 | 224 |

4.9.17: Relationship between Spirituality and Sustainable Procurement with the Different Working Tenure of Procurement Professionals

The section investigates the research question: ‘Is there a relationship between spirituality and sustainable procurement with the working tenure of procurement professionals?’ The six different working tenure of procurement professionals are: 0–2 years, 2–5 years, 5–8 years, 8–12 years, 12–15 years and 15 and above. Table 4.35 below confirms that the relationship between spirituality and sustainable procurement professionals is highly significant between the procurement professionals who have been working in their current role for 2–5 years ($r=0.477$, $p=0.001$), 5–8 years ($r=0.557$, $p=0.000$) and for more than 15 years ($r=0.615$, $p=0.000$).

[continues on following page]

Table 4.35: Relationship between Working Tenure, Spirituality and Sustainable Procurement

| Working in this role (years) | | | SP |
|------------------------------|---|---------------------|--------|
| Less than 2 years | S | Pearson correlation | -.432 |
| | | Sig. (2-tailed) | .245 |
| | | N | 9 |
| 2–5 years | S | Pearson correlation | .477** |
| | | Sig. (2-tailed) | .001 |
| | | N | 43 |
| 5–8 years | S | Pearson correlation | .557** |
| | | Sig. (2-tailed) | .000 |
| | | N | 67 |
| 8–12 years | S | Pearson correlation | .259 |
| | | Sig. (2-tailed) | .075 |
| | | N | 48 |
| 12–15 years | S | Pearson correlation | -.245 |
| | | Sig. (2-tailed) | .379 |
| | | N | 15 |
| 15-above | S | Pearson correlation | .615** |
| | | Sig. (2-tailed) | .000 |
| | | N | 36 |

4.9.18: Difference in the Perception of Spirituality and Sustainable Procurement within the Different Working Tenure of Procurement Professionals

This section investigates the research question: ‘Is there a difference in the perception of spirituality and sustainable procurement within the different working tenure of procurement professionals?’

One-way analysis of variance (ANOVA) is conducted to compare the variance between the mean score of spirituality and sustainable procurement across different working tenure (years of working) of procurement professionals. The test of homogeneity of variance tests whether the variance within each of the populations is equal or not. If the variances are not homogeneous, they are said to be heterogeneous. In Table 4.36 below, it is shown that the Sig. value for spirituality is 0.020 and sustainable procurement is 0.000.

The significant value informs that spirituality and sustainable procurement have violated the assumption of homogeneity of variance (Pallant 2009).

Table 4.36: Test of Homogeneity of Variances across Working Tenure

| | Levene Statistic | df1 | df2 | Sig. |
|----|------------------|-----|-----|------|
| S | 2.746 | 8 | 216 | .020 |
| SP | 5.009 | 8 | 216 | .000 |

Table 4.37 below contains an analysis of variance (ANOVA) which assesses the overall significance. As the value of F for spirituality is >1 at 5.573 and the p-value is <0.05 at 0.00, there is a significant difference in the perception of spirituality of procurement professionals across different working tenure (years of working) of procurement professionals. The F value for sustainable procurement is >1 at 12.198 and the p-value is <0.05 at 0.00 shows that there is a significant difference in the perception of sustainable procurement of procurement professionals across different working tenure (years of working) of procurement professionals.

The post hoc test in Table 4.38 below shows that procurement professionals working in the role for less than two years and procurement professionals working in the role for 12–15 years differ significantly in terms of their spirituality scores. The post hoc test also reveals that procurement professionals working in the role for less than two years, 2–5 years, 5–8 years, 8–12 years, 12–15 years and 15 and above years differ significantly in terms of their sustainable procurement scores.

Table 4.37: One-Way Analysis of Variance between Different Working Tenures of Procurement Professionals

| | | Sum of Squares | df | Mean Square | F | Sig. |
|----|----------------|----------------|-----|-------------|--------|------|
| S | Between groups | 5.294 | 8 | 1.059 | 5.573 | .000 |
| | Within groups | 40.276 | 216 | .190 | | |
| | Total | 45.570 | 224 | | | |
| SP | Between groups | 9.491 | 8 | 1.898 | 12.198 | .000 |
| | Within groups | 32.990 | 216 | .156 | | |
| | Total | 42.481 | 224 | | | |

Table 4.38: Post-Hoc Test between Different Working Tenures of Procurement Professionals

| Dependent Variables (i) working in this role (years) | (j) Working in this role (years) | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
|--|----------------------------------|-----------------------|------------|-------|-------------------------|-------------|
| | | | | | Lower Bound | Upper Bound |
| S Less than 2 years | 2–5 years | -.14334 | .15977 | .947 | -.6028 | .3162 |
| | 5–8 years | -.25717 | .15474 | .559 | -.7022 | .1879 |
| | 8–12 years | -.35289 | .15833 | .229 | -.8082 | .1025 |
| | 12–15 years | -.55181* | .18378 | .035 | -1.0804 | -.0233 |
| | 15– above | .01652 | .16244 | 1.000 | -.4507 | .4837 |
| SP Less than 2 years | 2–5 years | -.66518* | .14460 | .000 | -1.0810 | -.2493 |
| | 5–8 years | -.91219* | .14005 | .000 | -1.3150 | -.5094 |
| | 8–12 years | -.88479* | .14329 | .000 | -1.2969 | -.4727 |
| | 12–15 years | -.87748* | .16633 | .000 | -1.3558 | -.3991 |
| | 15– above | -.56282* | .14701 | .002 | -.9856 | -.1400 |

*. The mean difference is significant at the 0.05 level.

Summary: No significant relationship between the working tenure of procurement professionals, spirituality and sustainable procurement is confirmed in this section. Results show that, within the three working tenure of procurement professionals (2–5 year, 5–8 years and above 15 years), there is a highly significant relationship between spirituality and sustainable procurement. However, there is no relationship between spirituality and sustainable procurement within the 8–12 years and 12–15 years of working tenure of procurement professionals. Results also confirm that procurement

professionals working in the role for less than two years and procurement professionals working in the role for 12–15 years differ significantly in their perception of spirituality. The post hoc test also reveals that procurement professionals working in the role for less than two years, 2–5 years, 5–8 years, 8–12 years, 12–15 years and 15 and above years differ significantly in their perception of sustainable procurement.

4.10: Conclusion

This chapter presented the quantitative data analysis and answered the research questions that investigate the correlation between spirituality and sustainable procurement within the Australian higher education sector. It describes the procedures used in the quantitative data analysis, presented the results which include testing the reliability of the scale used, and reported the correlation analysis, ANOVA, independent t-test. Furthermore, the correlation analysis, ANOVA and independent t-test uncovered some significant relationships between the dimensions of spirituality and the dimensions of sustainable procurement in this sector.

The results of the descriptive analysis presented a background of the population frame who are procurement professionals working in the Australian higher education sector. The research questions address the gap within business and management literature which omits to address the relationship between spirituality and sustainable procurement and the analysis of this thesis confirms some significant relationship between the dimensions of spirituality and sustainable procurement. The following chapter discusses the findings of the data analysis and compares it with the existing literature.

CHAPTER FIVE

FINDINGS AND DISCUSSION

5.1: Objective

The purpose of this chapter is to discuss and present the findings of the data analysis and show the way in which these findings relate, contrast and extend the existing literature, and how they contribute to theory-building and knowledge of the relationship between spirituality and sustainable procurement.

5.2: Introduction

The previous thesis chapter presented the results of data analysis which confirmed that there is a significant positive as well as negative relationship between spirituality and sustainable procurement at the dimension level.

A quantitative methodology using Pearson correlation analysis, t-tests and ANOVA was undertaken to investigate the 19 research questions on a sample of 224 procurement professionals working within the Australian higher education sector. The following sections present the findings with linkages made to the spirituality and sustainable procurement literature.

5.3: Background

The literature shows there is a gap in the lack of empirical evidence and theoretical constructs directly supporting the relationship between the concepts of spirituality and sustainable procurement. The thesis attempts to close this gap identified in the literature of business and management research as outlined in Chapter Two. Whilst recognising scholars' efforts to date, these efforts are not evident in the current literature. In addition, this thesis shows that the demographic characteristics of procurement professionals such as age, gender, educational qualifications, working tenure and annual purchasing expenditure contribute to the relationship of spirituality and sustainable procurement. Thus utilising a quantitative approach, this thesis investigated the relationship between spirituality and sustainable procurement within the Australian higher education sector.

While the findings as outlined in this chapter are concerned with procurement professionals within 39 Australian universities, there are opportunities in future research to investigate their applicability to other sectors. Also these findings may only have limited applicability, as they do not deal with the complexity of organisational procurement, combined with other factors such as social policy and value for money. It is anticipated that this thesis has established a foundation for understanding the spirituality–sustainable procurement relationship, which may assist in the enhancement or development of sustainable procurement practices that incorporate holistic values such as organisational wellbeing.

Environmental philosophers such as Callicott and Ames (1989) wrote about the morally satisfying ways for human beings to relate to nature. Their futuristic study discussed an environmental crisis including environmental population, aesthetic degradation of nature,

human overpopulation and resource depletion. They urged philosophical interventions, including spirituality, as a solution to environmental wellbeing. This thesis extends the work of Callicott and Ames (1989) by providing evidence for the relationship between spirituality and environmental practices which is a dimension of sustainable procurement.

This thesis extends Corner's (2009) conjecture, that there is a potential relationship between workplace spirituality and business ethics through the experiential knowledge provided by yoga masters. This empirical thesis provides substantial evidence confirmed by 224 procurement professionals that dimension of spirituality 'awareness of life' share a relationship with ethics (ethics-deceitful practices) which has implications for organisational ethics that researchers may like to use as a foundation for further inquiry.

5.4: Overview of the Relationship between the Dimensions of Spirituality and the Dimensions of Sustainable Procurement

Data generated from the 224 procurement professionals ranging from procurement directors to procurement assistants confirmed several relationships between the dimensions of spirituality and sustainable procurement. The quantitative data strengthens this investigation and confirm that dimension one of spirituality (Larger context) has a positive correlation with 'Environment', 'Human rights', 'Philanthropy', 'Safety', 'Top management leadership', 'Customer pressure', 'Employee initiatives', 'Government regulation', 'Individual values', and 'People-orientation'. Dimension one of spirituality stands on being 'Truthful', 'Sharing', 'Guiding others', 'Sense of purpose', 'Finding meaning' and 'Interest/wellbeing of others'.

The 'Individual values' dimension of sustainable procurement stands on morale of employees, personal desire to do right, sense of obligation and underlying values of an individual. This finding accords with Giacalone and Jurkiewicz (2003, p. 11) that workplace spirituality has the potential to enhance the ethical climate in organisations and management practices, without adversely affecting employee concerns. However, there is also a negative relationship ($r=-0.151$, $p=0.024$) between 'Awareness of life' and 'Ethics-deceitful practices'. In other words, with the increase in 'Awareness of life', there will be a decrease in 'Ethics-deceitful practices', which is also confirmed in the literature (Kolodinsky et al. 2008). This means there is a connection and interplay between the two concepts of spirituality and sustainable procurement at the dimension level. In this way, the thesis could have future implications. For example, future studies may like to understand how and in what ways spirituality impacts the sustainable procurement, which is consistent with claims that spirituality has a practical and scientific relationship with the workplace (Klerk 2005). Thus, a wide range of procurement professionals, from procurement directors to procurement administrators, confirmed the relationship between spirituality and ethics within the Australian context.

Dimension two of spirituality (Awareness of life) which stands on 'Interconnectedness', 'Personal reflection', and 'Health and inner peace' correlated with 'Environment', 'Diversity', 'Human rights', 'Philanthropy', 'Safety', 'Top management leadership', 'Customer pressure', 'Employee initiatives', 'Government regulation', 'Individual values' and 'People-orientation'. Therefore, it can be stated with confidence that the individual awareness of procurement professionals share a relationship with the dimensions of sustainable procurement. This finding extends Kolodinsky et al.'s 2008 study, which confirmed that workplace spirituality is about social responsibility and

environmental awareness. This thesis confirmed that spirituality (Awareness of life) and environment share a relationship with the Australian higher education sector. Thus, it is reasonable to state spirituality and environment share a relationship.

Ray (1993) stated that current organisations are undergoing a shift towards doing business from our most profound inner awareness. Extending Ray's (1993) viewpoint, this thesis confirms and provides evidence that awareness (a dimension of spirituality) and environment, human rights, safety, philanthropy and values share a relationship. This suggests that awareness contributes to socially responsible purchasing, to date a relationship that has hitherto not been supported with empirical data.

Dimension three of spirituality (Compassion) which constitutes 'Sensitivity', 'Giving and helping', 'Nature friendly', and 'Valuing life' correlated with 'Safety', 'Top management leadership', 'Employee initiatives', 'Government regulation' and 'People-orientation'. This confirms that dimension three of spirituality shares a relationship with five dimensions of sustainable procurement. This thesis extends the Australian study conducted by Issa (2009), which investigated the existence of ethical mindsets in the service sector. Compassion was a dimension of two (Aesthetic spirituality and Optimism) out of eight ethical mindset components in Issa's (2009) study. Thus, it can be stated with confidence that compassion is a reliable dimension of spirituality. This finding also contributes to authors such as Reave (2005) and Fry (2004) who find that there is uniformity between spirituality and effective leadership. All three dimensions of spirituality in this thesis are correlated with top management leadership, thus it can be stated that spirituality and leadership share a relationship.

5.5: Contribution to the Conceptual and Theory Building Literature

This thesis extends and adds empirical data to the predominantly conceptual and theory-building spirituality and sustainable procurement literature (Geng & Doberstein, 2008; Marques 2006; Sadikan, 2008; Sheep, 2006). There is a confirmed correlation between spirituality and individual values of procurement professionals, human rights and philanthropy. In this way it refutes the notion that spirituality is not feasible in the top management and adds empirical data to the literature. It is evident in this thesis that spirituality is strongly placed among procurement professionals including procurement director, managers, and team leaders.

Rhodes (2006, p2) states that there are ‘six characteristics of workplace spirituality in that it: 1) emphasises sustainability; 2) values contribution; 3) prizes creativity; 4) cultivates inclusion; 5) develops principles; and 6) promotes vocation’. According to Rhodes, these characteristics help in understanding the role that spirituality can play in organisations, such as bringing values that positively impact on the bottom line. Rhodes included sustainability as one of the characteristics of spirituality, and sustainable procurement includes sustainable development (UNCEP, 2005; Walker et al., 2009). This thesis adds value and data to Rhodes’ (2006) claim that spirituality-sustainability share a relationship and presents an opportunity for future studies to enquire into the sustainable mindset of procurement professionals and its interplay with spirituality.

The confirmed relationship between spirituality and sustainable procurement is a major breakthrough for authors such as Nandram and Borden (2010) and Kolodinsky et al., (2008) who claim that spirituality incorporates several ethical concepts including social responsibility. Data from 224 procurement professionals at three different levels, ranging

from procurement directors to procurement assistants, confirms that spirituality is associated with responsible and ethical values such as 'Environment', 'Human rights', 'Philanthropy' and 'Values', thus extending the viewpoints of Nandram and Borden (2010) and Kolodinsky et al. (2008). While it is important to note that this thesis does not show causality, it does demonstrate the need for further research to determine if spirituality is a predictor of sustainable procurement.

Fry (2003, 2004) developed a causal theory of spiritual leadership and found that spiritual leadership is a predictor of ethical wellbeing. In this thesis, the three-tier procurement professionals confirm that dimension one of spirituality which is 'Larger context' has a relationship ($r=0.325$, $p=0.000$) with 'Top management leadership', dimension two of spirituality 'Awareness of life' has a relationship ($r=0.456$, $p=0.000$) with 'Top management leadership' and dimension three of spirituality 'Compassion' has a relationship ($r=0.239$, $p=0.000$) with 'Top management leadership'. This finding confirms that spirituality is correlated with 'Top management leadership' (dimension of sustainable procurement) which inquires the department's involvement in socially responsible purchasing including ethics, thus extending the work of Fry (2003, 2004) within the Australian higher education sector.

This thesis reconfirms the reliability of the Human Spirituality Scale (HSS) and extends the study by Kolodinsky et al. (2008) in two ways. First, the thesis uses the same scale and confirms that it is a highly reliable scale (the Cronbach's alpha value for the HSS in this thesis was 0.881 and Kolodinsky et al.'s 2008 study reported the Cronbach's alpha=0.85) and second, it applies this scale within the Australian higher education

sector, in particular to procurement professionals. Thus, it can be stated that the HSS scale is also reliable among procurement professionals within the education sector.

The thesis is also in line with the study by Petshsawang and Duchon (2009) who developed a spirituality scale in which one of the dimensions is compassion. Thus, the dimension of compassion is common to both the spirituality scale of Petshsawang and Duchon (2009) and the Human Spirituality Scale used in this thesis. This reconfirms that compassion is a dependable dimension of spirituality. Future studies may like to extend the dimensions of spirituality and sustainable procurement.

The workplace spirituality study conducted in the Malaysian education sector by Abdullah et al. (2009) used the 'Spirituality at Work' scale developed by Ashmos and Duchon (2000). Their study found that a relationship between workplace spirituality and leadership effectiveness leading to increased satisfaction and increased performance among secondary school principals in Malaysia. Although conducted in a different location, this thesis extends the work conducted by Abdullah et al. (2009) by investigating spirituality (using the Human Spirituality Scale) among procurement professionals in the Australian higher education sector and confirms that spirituality and top management leadership share a relationship. Thus, the thesis reconfirms the relationship between spirituality and leadership. In this way, the thesis contributes to the work of authors such as Cacioppe (2000, p.53) who stated that 'it is time to move beyond the scientific, materialistic paradigm of the 20th century toward a more holistic and spiritual view for the workplace in the 21st century'.

In prior studies (Abdullah et al., 2009; Ashmos & Duchon, 2000; Despande, 2012; Giacalone & Jurkiewicz, 2003; Kazemipour et al., 2012; Klodinsky et al., 2008; Milliman et al., 2003; Petchsawanga & Duchon, 2012), the impact of spirituality and various organisational outcomes was the central research enquiry and as stated earlier, to date, the literature has not addressed the sustainable procurement and spirituality relationship. Workplace spirituality researchers (Carroll, 2004; Dunphy, 2009) have shown considerable interest in the dynamics between spirituality and sustainable development. Yamini's (2008) in-depth case study-based research thesis conducted in Delhi found that spirituality and sustainable development have a productive, coherent and interdependent relationship. Yamini's research, conducted on people from Delhi who plan and implement town development, broadened the spirituality dimension by confirming its positive association with sustainability. This thesis has moved a step further and complements the results of Yamini's qualitative research that there is a relationship between spirituality and sustainable procurement among 224 procurement professionals. By conducting a quantitative investigation, this thesis provides a quantitative research methods contribution to the existing qualitative methods literature so that both qualitative and quantitative studies are represented showing that spirituality and sustainability including sustainable procurement share a relationship.

The 26 out of 39 relationships between spirituality and sustainable procurement uncovered in this thesis confirms the view of Marques (2008) that workplace spirituality is gaining momentum and, unlike before, it is not too abstract and does interest procurement professionals. Spirituality is considered a notion of the East; however more than 50 % of the procurement professionals, including directors and managers working in the Australian higher education sector, confirm that either their spirituality level is 'Very

Strong’ or ‘Strong’. Thus, the acceptance of spirituality among the workplace professionals in Australia and the US literature is confirmed. With a majority of procurement professionals confirming that they are spiritual, this poses a challenge for future research as to how to distinguish spirituality levels. Overall, the thesis confirms that more than 50 % of procurement professionals consider themselves to be spiritual. This finding is a major contribution for contemporary organisations and future studies because it shows the workforce inclinations of procurement professionals. Furthermore, the spirituality-environment relationship supports the Johnson (2009) conjecture that spirituality-driven leaders are environment friendly and foster sustainability in their workplace procurement decisions. Thus, the findings show that procurement professionals are aware of spirituality and it is well recognised within the procurement professional workforce.

This thesis extends the workplace spirituality study conducted by Fernando et al. (2009) which is based on in-depth interviews and captured leaders’ spirituality termed as ‘transcendental leadership’. From these in-depth interviews of business leaders, it was found that charity and philanthropic activities were a significant part of their business. This thesis extends Fernando et al.’s (2009) study within the Australian higher education sector on 224 procurement professionals showing that there is a positive relationship between spirituality and philanthropy. For example, dimension one of spirituality ‘Larger context’ has a relationship ($r=0.200$, $p=0.003$) with ‘Philanthropy’, and dimension two of spirituality ‘Awareness of life’ has a relationship ($r=0.422$, $p=0.000$) with ‘Philanthropy’. Thus, it is now reliable to state that spirituality and philanthropy share a relationship in the Australian higher education sector. The dimension of philanthropy in this thesis stands on ‘local charities’, ‘donations and local community performance’. It is suggested

that future studies can investigate the triangulation between spirituality, philanthropy and leadership.

Marques and Allevato (2011) proposed the concept of eco-citizenship in the higher education sector. They contributed to the literature by combining the ecological concept with science, spirituality and awareness. Allevato and Marques (2011) stated that spirituality and environment are interdependent and united. This thesis confirms and extends the Marques and Allevato (2011) claim that the two dimensions of spirituality ‘Larger context’ and ‘Awareness of life’ share a correlation with the dimension of sustainable procurement, which is ‘Environment’, and presents the first empirical findings linking the dimensions of spirituality with the dimensions of sustainable procurement comprising environment. In this way, it integrates awareness and environment which together facilitates sustainable procurement. Thus, the thesis provides strong empirical evidence to extend the conceptual and theory-building literature such as that of Rooney and McKeena (2010), Poole (2009), and Marques et al., (2007).

There was no diverse pattern observed in the sustainable procurement scale as was found in the spirituality scale. As discussed in Chapter Three, multiple sustainable procurement instruments were not found in the literature; this is an area for future research development. The Purchasing Social Responsibility (PSR) scale reflects the length and breadth of the sustainable procurement concept and has also been reviewed by an expert panel and piloted on ten public sector procurement officers to ensure efficacy and validity in the US public sector.

Brammer and Walker (2007) confirmed that the highly reliable and validated PSR scale used in this thesis embodies a wide range of aspects related to social and environmental improvements. The findings of this thesis extend Gough and Scott's (2007, 2008) work linking the sustainable development and procurement literature in the higher education sector, particularly in Europe. His extensive research on sustainable development in higher education, conducted predominantly from 2003–2010, included the following: investigating sustainable development at university level; environmental education research; sustainable development and its barriers and implication in universities; and developing and promoting sustainable development in universities.

The procurement literature within Australia is growing and it is an important area of research for several compelling reasons. For example, if sustainable procurement is executed effectively, it can help to reduce the amount of products purchased and disposed of, saving natural resources and reducing environmental pollution (Sustainable Procurement Guidelines, 2011).

This thesis confirms Giacalone and Jurkiewicz's (2010) theoretical framework proposing that spirituality in organisations can manifest itself in three ways: a parallel relationship (workplace and spirituality are separate and do not influence each other); an adversarial relationship (spirituality creates adversarial instances such as antagonism and hostility); and an integrative relationship (a potential positive relationship between spirituality and workplace). In this study, many procurement professionals acknowledged the role of spirituality and from the findings, it can be concluded that spirituality in the workplace often has an integrative relationship with sustainable procurement. Procurement professionals acknowledged that there are 26 relationships between spirituality and

sustainable procurement. The sub-research questions also confirm that there is an integrative relationship between spirituality and sustainable procurement. It can be concluded that spirituality in the workplace often has an integrative relationship with sustainable procurement.

The thesis findings show that there are inconsistencies in the procurement structure within the 39 Australian universities. This has not been uncovered in previous procurement literature. For example, a few universities have a separate procurement board, whereas others do not. There is also an inconsistency in the number of procurement professionals employed by each university. For example, 'Group of Eight' Australian Universities have more than 50 procurement-related staff whereas other universities have less than ten procurement-related staff. The professional designations of procurement professionals also vary among universities. A few universities have a senior executive officer and others have executive directors. Middle management also varies among universities in terms of their designation. The analysis in this thesis suggests that the relationship between spirituality and sustainable procurement may still depend on other factors, not entirely on demographic characteristics.

5.6: Overview of the Age of Procurement Professionals, Spirituality and Sustainable Procurement

The thesis findings show which age categories of procurement professionals exhibit a relationship with spirituality and sustainable procurement and, furthermore, how different age categories of professionals perceive spirituality and sustainable procurement.

Analysis conducted using the Pearson correlation coefficient did not find any significant relationship between the age of procurement professionals, spirituality and sustainable procurement within the Australian higher education sector. It is suggestive in this thesis that the age of procurement professionals, spirituality and sustainable procurement are not correlated. While Winseman (2003) found that young people are less spiritual than adults, with spiritual commitment increasing with age, this thesis found no evidence of any correlation between age, spirituality and sustainable procurement.

The results show that procurement professionals are mostly mature-aged professionals. The most prevalent within the 39 Australian universities were those aged 51–60 years (37.9 %) followed by those aged 36–50 years. Similarly, the study by Larson and Morris (2008) conducted on purchasing and supply professionals in Canada found that procurement professionals are mostly of mature-age. The findings in this thesis, that procurement professionals are predominantly mature-aged professionals, extends the findings of Larson and Morris (2008) to the Australian context.

The analysis found a significant relationship between spirituality and sustainable procurement within three age categories of procurement professionals: 26–35 years ($r=0.661$, $p=0.000$); 51–60 years ($r=0.498$, $p=0.000$); and 61 years plus ($r=0.661$, $p=0.000$). A significant difference was also found across different age brackets of procurement professionals in the perception of spirituality. There was no significant difference found in the perception of sustainable procurement across the different age brackets of procurement professionals. The findings suggest that within the three different age categories including young and mature aged procurement professionals, there is a relationship between spirituality and sustainable procurement. No previous studies in the

literature have identified age with spirituality and sustainable procurement. Future studies can raise questions and further investigate the similarities and differences between young and mature-age procurement professionals in their perception of spirituality and sustainable procurement.

The workplace spirituality and sustainable procurement literature does not provide reasons as to why spirituality varies among different age categories. There is a scant body of workplace spirituality literature, which uses 'age' as a variable. At this stage, it cannot be explained as to why there are differences among procurement professionals. This thesis extends the literature and found a significant relationship between spirituality and sustainable procurement within three age categories of procurement professionals: 26–35 years, 51–60 years, and 61 years plus. Future studies may like to shed light on this research gap.

Workplace spirituality studies such as Kolodinsky et al., (2008), Fry et al., (2005), and Javanmard (2012) have recorded the age categories of their respondents; however, they did not examine the relationship between spirituality and age. The thesis provides evidence that the relationship between spirituality and sustainable procurement with three age categories of procurement professionals exists (26-35 years, 51-60 years and 61 years plus) and sustainable organisations may systematically seek to develop any such option that can result in enhanced sustainability.

5.7: Overview of the Gender of Procurement Professionals, Spirituality and Sustainable Procurement

The correlation between gender, spirituality and sustainable procurement behaviour of procurement professionals has hitherto not been systematically analysed using statistical techniques. This thesis found an association ($r=.207$, $p=.002$) between gender and spirituality.

The findings in this thesis showed that there are more female than male procurement professionals working in the 39 Australian universities. Hence, the overall results are subject to the dominance of female procurement professionals in this domain.

There is a correlation ($r=0.207$, $p=0.002$) between spirituality and the gender of procurement professionals. On the other hand, there is no correlation between sustainable procurement and the gender of procurement professionals. There is also a correlation between spirituality and sustainable procurement for both male procurement professionals ($r=0.478$, $p=0.000$) and female procurement professionals ($r=0.343$, $p=0.000$), but the results also confirmed that there is a significant difference in male and female procurement professionals' perception of spirituality which means male and female respondents have different conceptions of spirituality. However, there is no significant difference between male and female procurement professionals in their perception of sustainable procurement which means male and female respondents perceive sustainable procurement in a similar manner. This finding extends the literature such as Grant et al.'s (2004) workplace spirituality study. Their study was conducted in a university hospital and 91 % of their respondents were female nurses. They found that 88 % of the nurses reported that they were highly spiritual. In the current thesis, 28.6 % of the female procurement professionals reported that their spirituality level was 'Very Strong' and 29

% of the female procurement professionals confirm that their spirituality level was 'Strong'. The primary inference is that female employees such as nurses and procurement professionals irrespective of their profession embrace spirituality and regard themselves as spiritual.

Thesis confirms that there is a relationship ($r=.207$, $p=.002$) between gender and spirituality; there is a difference in the male and female procurement professionals' perception of spirituality, thus it extends the literature such as the study by Stephenson (2004) which found that female board directors are different from their male colleagues and foster greater social and community responsibility and innovation, and the study by Williams (2003), which found that having female directors on boards is positively associated with the firms' corporate philanthropic practices. This thesis extends Grant et al.'s (2004) and Williams' (2003) studies. It found evidence that male and female workforce have different conceptions of spirituality and that procurement professionals share a positive relationship with sustainable procurement which has the dimensions of philanthropy, human rights, environment and values. A correlation was also found between spirituality and sustainable procurement for both male ($r=0.478$, $p=0.000$) and female procurement professionals ($r=0.343$, $p=0.000$). This means both male and female procurement professionals find that there is a relationship between spirituality and sustainable procurement. Future studies can use the current research to understand how spirituality, gender and ethics can interact to contribute to the sustainability of the organisations. Thus, the results indicate that females are more spiritual and that men and women in the workforce have different conceptions of spirituality.

5.8: Overview of the Educational Qualification of Procurement Professionals, Spirituality and Sustainable Procurement

This thesis extends the sustainable procurement literature in the Australian context by informing the educational qualification of procurement professionals and related research questions. It found that the majority of the procurement professionals hold a Bachelor's degree (45.5%) followed by a Masters qualification (26.8%).

The sustainability literature is supportive that education facilitates and develops the adoption of socially responsible techniques. Organisations are establishing a variety of educational networks to promote the learning and understanding of sustainability issues (Kelly & Alam , 2009). This thesis confirms that there is a negative correlation between the educational qualification of procurement professionals and spirituality ($r=-0.306$, $p=0.000$) and sustainable procurement ($r=-0.246$, $p=0.000$). This means with the increase in the educational qualification of procurement professionals there is a decrease in spirituality and sustainable procurement.

A relationship was found between spirituality and sustainable procurement within the Bachelor degree, Master degree and Diploma qualification of procurement professionals. No relationship between spirituality and sustainable procurement was found among procurement professionals who hold a PhD qualification. The thesis also found a difference in the perception of spirituality and sustainable procurement among procurement professionals of different educational qualification working in the Australian higher education sector.

The findings of this thesis offer considerable developments with regard to the relationship between educational qualifications, spirituality and sustainable procurement. Cortese

(2003) stated that education increases the moral responsibility of an individual in the form of awareness, knowledge, skills and values needed for a sustainable future, with education deepening one's understanding of the society, nature and our responsibility towards it. In contrast to the Cortese's claim, the current thesis found that there is a negative relationship between qualification and spirituality ($r=-.306$, $p=0.00$) and sustainable procurement ($r=-.246$, $p=0.00$) which means that an increase in educational attainment is associated with a decrease in spirituality and sustainable procurement among procurement professionals working within the Australian higher education sector. However, future studies may like to investigate the reasons for this negative relationship and address this contradiction.

This thesis extends the mixed methods study conducted by Issa and Pick (2010) which found that spirituality makes a significant difference within the workplace and is highly associated with enhancing the ethical climate of the organisations. The Issa and Pick (2010) study was conducted among different ranks in diverse organisations in the Australian service sector, mainly in education, healthcare and finance. The current thesis extends Issa and Pick (2010) study within the Australian higher education sector and confirmed that there is a relationship between the dimension one of spirituality 'awareness of life' with 'human rights', 'philanthropy' and 'environment' which constitutes ethics in their dimension. 224 procurement professionals confirm this finding. In this way, the thesis enhanced the scope of spirituality to a new population sample comprised of procurement professionals. The highest percentage of employees in the Issa and Pick (2010) study had postgraduate qualifications (39%), while in the current thesis 26.8% of procurement professionals have a Masters qualification and 45.5% a Bachelors qualification. Thus, it can be inferred that service sector employees and procurement

professionals working within the Australian higher education sector in Australia are highly qualified, holding graduate and postgraduate qualifications.

5.9: Overview of the Annual Purchasing Expenditure of Procurement Professionals, Spirituality and Sustainable Procurement

This section discusses the findings between the annual purchasing expenditure, spirituality and the sustainable procurement behaviour of procurement professionals. Prior to this thesis, this has not been systematically investigated and empirically analysed in the literature.

The results confirm that there is no relationship between the annual purchasing expenditure, spirituality and sustainable procurement. The results also confirm that the relationship between spirituality and sustainable procurement is significant ($r=.593$, $p=0.00$) within the procurement professionals who have the higher purchasing expenditure of AUD\$100,000 and above. In other words, the procurement professionals with higher purchasing power believe that spirituality and sustainable procurement share a relationship. On the other hand, no significant difference was found in the perception of sustainable procurement of procurement professionals working in the Australian higher education sector across five different categories of annual purchasing expenditure. Future studies may like to understand as to how the corporate professionals comprehend the relationship between spirituality and sustainable procurement. It is beyond the scope of this thesis to justify the reasons as to why there is relationship between spirituality and sustainable procurement within higher purchasing professionals. This is a possible area of future research.

The purchasing decisions of procurement professionals result in goods and services that directly meet the needs of the organisation. This current thesis found that 67.4 % of procurement professionals are responsible for annual purchasing of AUD\$100,000 and above, of which 44.3 % are middle managers. As these professionals are responsible for purchasing, their actions are critical for green procurement. The survey sent to respondents in 39 Australian universities enquired about the dimensions of sustainable procurement, including top management leadership, human rights, environment and philanthropy, all of which influence socially responsible purchasing.

The international study conducted by Brammer and Walker (2011) in 20 countries on 880 procurement practitioners shares some common ground with the current thesis. The respondents of the study by Brammer and Walker (2011) were purchasing directors and managers working in the public sector. This thesis extends the work of Brammer and Walker (2011) by utilizing the same PSR scale and investigating 224 procurement professionals within 39 Australian universities. The study of Brammer and Walker (2011) also reported the purchasing expenditure by procurement managers/directors in education sector across 20 countries. This thesis found that 67.4 % of procurement professionals are responsible for annual purchasing of AUD\$100,000 and above, of which 44.3 % are middle managers. This thesis extends the Brammer and Walker (2011) work in Australia and investigated 224 procurement professionals who hold a similar designation such as procurement directors and procurement managers, thereby confirming that spirituality and sustainable procurement share a relationship at the dimension level not investigated before. The existing procurement literature overlooks the spirituality of procurement professionals; thus this thesis makes an original contribution by extending the existing literature.

Walker (2008) stated that governments, public sector bodies, not-for-profit organisations, private sector organisations, business customers and consumers could all contribute to the sustainability agenda. In a similar vein, Gough and Scott (2007) stated that sustainable procurement has the potential to impact the cost savings for individual institutions and consequently lead to environment benefits. The dimensions of sustainable procurement such as 'Environment', 'Diversity' and 'Ethics' in this thesis stands on environmental well-being as mentioned by Gough and Scott (2007) share a relationship with spirituality. This thesis extends Gough and Scott (2007) study and confirms that spirituality, through sustainable procurement potentially contributes to the sustainability agenda.

The empirical findings of this thesis confirm Dunphy's (2009) viewpoint that the concept of mindful living and decision-making, triangulation of ecological, environmental and social sustainability and interconnectedness will find a central place in modern organisations. These findings now provide empirical evidence that procurement professionals regarded themselves as spiritual (29 % of procurement professionals perceived themselves as having a 'Strong' spirituality and 28.6 % believe their level of spirituality as 'Very Strong'). Furthermore, it found a relationship between spirituality and environment practices. It can be now stated that spirituality exists among procurement professionals who are directors, managers and there is a potential that spirituality could contribute to the sustainability pillars which future studies may like to investigate.

5.10: Overview of the Position of Procurement Professionals, Spirituality and Sustainable Procurement

The data shows a lack of uniformity in the title/position of procurement professionals: they were known by various names such as Procurement Analyst, Procurement Specialist, Manager (Procurement Strategy), Project Manager (launching Operations), Project Director, Procurement Planner, Purchasing Officer, Procurement Expert and Procurement Coordinator. It is difficult to differentiate the duties and responsibilities assigned to these procurement professionals which is also beyond the scope of this thesis. However, as they all work under the procurement domain, future studies may like to distinguish their job responsibilities.

Demographic analysis confirmed that 58.5 % of the participants are middle management procurement professionals. Thus, more than half of the procurement professionals fall under the category of middle management. The top level procurement professionals, such as directors and executive directors, represent 18.3 % of the population. This finding is consistent with the Norwegian study conducted by Michelsen and Boer (2009), where 56.8 % of the respondents were middle level managers/purchase officers. This suggests that there are more procurement professionals in the middle management category than the top level or the first level. This finding provides new insights into where the concentration of procurement professionals sits in organisations today and provides a contribution to the procurement literature.

There was no significant relationship found between the title/position level of procurement professionals, spirituality and sustainable procurement. However, this thesis found a relationship between spirituality and sustainable procurement among the procurement professionals who are in top level positions, such as directors, executive

directors, and middle management levels, such as procurement team leaders and procurement managers. There was no relationship found between spirituality and sustainable procurement within the first level of procurement professionals, such as procurement administrators. No significant difference was found across the three different levels of job position (top management, middle management and first level) in the perception of spirituality and sustainable procurement among procurement professionals working in the Australian higher education sector. The results provide a tentative confirmation that top management employees believe that there is a relationship between spirituality and sustainable procurement.

Fernando and Jackson's (2006) interview-based study addressing workplace spirituality conducted in Sri Lanka, where four chairpersons, six managing directors and three directors from diverse ethnic backgrounds were interviewed, was based on the Grounded Theory Framework. Their study (n=26) informed that workplace spirituality enhanced decision-making in the workplace. This current thesis, based on the 'Spillover Theory', which investigated 224 procurement professionals including procurement directors, found that spirituality and socially responsible purchasing share a significant relationship at the dimension level in the Australian higher education sector. It is, however, important to better understand how they can be best developed and utilized.

Together with the study of Fernando and Jackson (2006), it can be inferred that top level management believe that spirituality has the potential to influence workforce decision-making, including sustainability factors.

5.11: Overview of the Working Tenure (Years of Working) of Procurement Professionals, Spirituality and Sustainable Procurement

To date, the working tenure (years of working) of procurement professionals within the Australian higher education sector was not reported in the literature. The relationship between the working tenure of procurement professionals, spirituality and sustainable procurement behaviour of procurement professionals has not been systematically analysed in the literature.

In regard to the number of years of working, 29.5 % of procurement professionals stated that they have been working in their procurement role for 5–8 years while 21.4 per had worked in this role for 8–12 years. This finding suggests that procurement professionals are experienced.

This thesis found no relationship between the working tenure of procurement professionals, spirituality and sustainable procurement. It was found that within three categories of working tenure (2–5 years: $r=0.477$, $p=0.001$; 5–8 years: $r=0.557$, $p=0.000$; and 15+ years: $r=0.615$, $p=0.000$), there is a highly significant relationship between spirituality and sustainable procurement. This suggests an inconsistency since procurement professionals with 2–5 years of working tenure and more than 15 years of working tenure both exhibited a significant relationship between spirituality and sustainable procurement. In the categories of 8–12 years and 12–15 years of working tenure, no relationship was found. This finding is not uniform because two different groups with vast difference in their working tenure exhibited the relationship. Future studies may like to investigate this finding inconsistency and provide the potential reasons for this variability. The finding addressing tenure, provide is a new contribution

to the literature because to date, no spirituality and sustainable procurement studies address a respondent's working tenures.

This thesis also found that procurement professionals working in their role for less than two years and for 12–15 years differ significantly (mean difference=0.551) in their perception of spirituality. Post-hoc test reveals that procurement professionals working in the role for less than two years, 2–5 years (mean difference=0.665), 5–8 years (mean difference=0.912), 8–12 years (mean difference=0.884), 12–15 years (mean difference=0.877) and 15+ years (mean difference=0.562), differ significantly in their perception of sustainable procurement. Thus, there is an inconsistency in the Australian higher education sector among procurement professionals with different working tenures. This finding is suggestive that the perception of sustainable procurement among different groups of procurement professionals is different.

Cousins et al.'s (2006) empirical study investigated the purchasing function patterns of 151 UK purchasing executives and its relationship with organisational performance. Their sample study population frame was also purchasing managers or their equivalent and director/presidents working within 800 UK manufacturing firms. The average length of tenure of the purchasing executives was 10.16 years. This suggests that procurement professionals possess a large amount of procurement experience.

The findings of this thesis extend the perspective of Bubna-Litic (2009) that spirituality should be further investigated and provides the reason for the inclusion of spirituality in the mainstream literature. Findings from the 224 procurement professionals confirm the relationship between spirituality and sustainable procurement and in this way the domain of spirituality is extended to the mainstream of procurement literature. The table below

presents the findings of this thesis and highlights that out of 39 relationships between spirituality and sustainable procurement, there are 26 confirmed relationships. The following table (Table 5.1) summarises the research findings:

[continues on following page]

Table 5.1: Findings Summary

| Research Questions | Findings |
|--|-------------------------|
| What are the relationships, if any, between the dimensions of spirituality and the dimensions of sustainable procurement within the Australian higher education sector? | 26 Relationships |
| Is there a relationship between the age of procurement professionals and spirituality and sustainable procurement? | <i>No</i> |
| Is there a relationship between spirituality and sustainable procurement within different age categories of procurement professionals? | <u>Yes</u> |
| Is there a difference in the perception of spirituality and sustainable procurement within the different age categories of procurement professionals? | <u>Yes</u> |
| Is there a relationship between the gender of procurement professionals and spirituality and sustainable procurement? | <u>Yes</u> |
| Is there a relationship between spirituality and sustainable procurement within male and female procurement professionals? | <u>Yes</u> |
| Is there a difference in the perception of spirituality and sustainable procurement within the male and female procurement professionals? | <u>Yes</u> |
| Is there a relationship between the educational qualifications of procurement professionals and spirituality and sustainable procurement? | <u>Yes</u> |
| Is there a relationship between spirituality and sustainable procurement within different levels of educational qualifications among procurement professionals? | <u>Yes</u> |
| Is there a difference in the perception of spirituality and sustainable procurement within the different levels of educational qualification of procurement professionals? | <u>Yes</u> |
| Is there a relationship between the annual purchasing expenditure of procurement professionals and spirituality and sustainable procurement? | <i>No</i> |
| Is there a relationship between spirituality and sustainable procurement within different categories of annual purchasing expenditure among procurement professionals? | <u>Yes</u> |
| Is there a difference in the perception of spirituality and sustainable procurement within the different categories of 'annual purchasing expenditure' of procurement professionals? | <i>No</i> |
| Is there any relationship between the position of procurement professionals and spirituality and sustainable procurement? | <i>No</i> |
| Is there a relationship between spirituality and sustainable procurement within the different position levels of procurement professionals? | <u>Yes</u> |
| Is there a difference in the perception of spirituality and sustainable procurement within the different position levels of procurement professionals? | <i>No</i> |
| Is there a relationship between the working tenure/years of working of procurement professionals and spirituality and sustainable procurement? | <i>No</i> |
| Is there a relationship between spirituality and sustainable procurement with the working tenure of procurement professionals? | <u>Yes</u> |
| Is there a difference in the perception of spirituality and sustainable procurement within the different working tenure of procurement professionals? | <u>Yes</u> |

Source: Author

As can be seen in table 5.1 above, 12 sub research questions were confirmed and six research questions were not confirmed.

5.12 Summary

This chapter illustrates the way in which the thesis findings relate to, contrast and extend the existing literature and how they contribute to extending the theory and knowledge of the relationship between spirituality and sustainable procurement in the Australian higher education sector. The findings confirm multiple significant relationships between the dimensions of spirituality and sustainable procurement.

This chapter discusses the thesis findings and the underlying similarities and differences found in the current literature. The relationship between spirituality and sustainable procurement has not been the subject of research to date thus confirming this thesis provides a new contribution to the spirituality and sustainability literature. This chapter shows the way in which the dimensions of spirituality and sustainable procurement are related. In addition, the findings of this thesis confirm that there are 26 out of 39 relationships between the dimensions of spirituality and sustainable procurement. Finally, some relationships between the demographic factors including age, gender, educational attainment, working tenure and annual purchasing expenditure of procurement professionals is confirmed with spirituality and sustainable procurement. This finding alone clearly shows the significance of new knowledge that this thesis contributes to the literature.

CHAPTER SIX

CONCLUSION

6.1: Objective

This concluding chapter reports the thesis contribution to the literature, key findings, and spiritual implications for the pursuit of sustainable procurement. Chapter 6 also provides avenues for future research to address in academic and industry contexts. The thesis limitations are identified.

6.2: Contribution to the Literature

The literature review suggested that the workplace spirituality literature is developing in various directions such as measurement development, concept specification, describing the features of organisations that facilitate workplace spirituality and the assessment of the outcomes of spirituality; it is limited with respect to addressing empirically-based research and analysis of the relationship between spirituality and sustainable procurement.

The literature has concentrated on investigating the organisational outcomes of spirituality such as leadership, productivity, commitment and wellbeing. Similarly, the procurement literature is concentrated in European countries; very limited research has been conducted in Australia. Thus, there is a dearth of theoretical and empirical work that extends the spirituality domain to newly emerging themes, such as procurement. This thesis confirms an explicit relationship between spirituality and sustainable procurement – a relationship that to date has not been addressed in the literature.

This thesis accomplished its three main objectives. First, it conducted an extensive literature review and analysis of the spirituality and sustainable procurement literature. Second, it empirically investigated and confirmed the relationship between spirituality and sustainable procurement, thus answering the 19 research questions. Third, it is the first study to investigate demographic characteristics such as age, qualification, gender, purchasing expenditure and working tenure and its relationship with spirituality and sustainable procurement of 224 procurement professionals working within the Australian higher education sector. These were drawn from three different levels ranging from Procurement Directors to Procurement Assistants across 39 Australian universities. The findings confirmed the relationship between the dimensions of spirituality and sustainable procurement.

The identification of demographic characteristics of procurement professionals is an important research area because demographic characteristics also include educational qualification and purchasing expenditure, which further guides an organisation's procurement portfolio, procurement strategy, and the procurement function (UN Procurement Handbook, 2006). Although, in this thesis, the demographic characteristics are not studied in conjunction with procurement strategy and portfolio, future studies can build upon these demographic data and extend the research to a new level.

The findings of this thesis confirm that spirituality spills over into the terrain of sustainable procurement, thus reconfirming the 'Spillover Theory'. This thesis notes inconsistencies in the procurement titles of procurement professionals as there are 25 different titles of procurement professionals within 39 Australian universities. On a similar note, there are inconsistencies in the number of procurement professionals

recruited by each university such as few universities have less than 10 procurement staff where as others have more than 80 procurement professionals and a separate procurement board.

The 19 research questions driving this thesis systematically contribute to the literature by investigating the detailed relationship between the dimensions of spirituality and sustainable procurement and its association with six demographic factors, representing new knowledge and an extension of the literature.

6.3: Key Findings

This thesis examined and confirmed 26 out of 39 relationships between the dimensions of spirituality (3 dimensions) and sustainable procurement (13 dimensions). It also confirmed negative relationships between the dimensions such as ‘Ethics-deceitful practices’ and ‘Awareness of life’. For the first time in the literature, this thesis uncovered the variance in the perception of spirituality and sustainable procurement between different demographic characteristics of procurement professionals. The demographic findings confirm that there are more female procurement professionals than male within the 39 Australian universities and that a majority of them are of a mature age holding a Bachelors degree. This new finding provides insights into the characteristics of the current Australian procurement professional workforce as well as the academic literature.

The spiritual orientation of procurement professionals is a valuable contribution to the literature as a majority of the respondents believed that either they are ‘Spiritual’ or ‘Very Spiritual’. More than 50 % of procurement professionals working in the 39 Australian universities consider themselves to be spiritual. This thesis contributed to the Australian

higher education sector in different ways. It revealed the demographic profile of the procurement professionals such as purchasing expenditure, working tenure, gender, educational qualification which the literature does not address and its relationship with spirituality and sustainable procurement.

Research conducted by Zimmerman (2004) confirm that employees find it hard to separate their professional life (work lives) from spiritual lives because they believe that integrating spirituality adds value and meaning to their life. It is established that application of spirituality in the workplace delivers a wide range of practical benefits at the workplace such as increased in creativity, honesty and moral values, sense of fulfilment and commitment which ultimately leads to organisational performance (Krishnakumar & Neck, 2002). Hence, the findings of this thesis have practical implications for long-term procurement executives and managers. The implementation of spirituality can be considered a relatively inexpensive way to achieve sustainable procurement. This thesis added empirical value to the workplace spirituality trend in management practices since the human-potential movement in the 50s (Wong, 2003).

In this way, this thesis addressed the gap in the literature and extended the practical application of workplace spirituality by investigating its relationship with sustainable procurement along the dimensions of compassion, environment, human rights, safety and awareness in life.

6.4: Spiritual Implications for the Pursuit of Sustainable Procurement

The thesis confirmed that there is a highly significant relationship between the dimensions of spirituality and sustainable procurement. Potentially it may open a new

avenue of spirituality and sustainable procurement that will enable organisations to engage in spirituality as a tool to enhance holistic sustainability benchmarks.

For organisations to remain sustainable, it is imperative to identify concepts that share an association with sustainability, including sustainable procurement. For this reason, this thesis addresses sustainable procurement because it is a key driver for promoting organisational sustainability and sustainable development commitments. The thesis contributes to the holistic sustainability concept which is constantly evolving, developing and growing in the literature. The concept stands for ‘social responsibility’; ‘green management’; ‘green marketing’; ‘green buying and purchasing’; ‘sustainable development’; ‘avoiding harmful products and discontinue purchase of such products’; ‘promoting eco-friendly items’; ‘sustainable progress’; and ‘value for money’. This thesis established a future-oriented pragmatic conceptualisation of the spirituality and sustainable procurement relationship.

6.5: Methodological Contribution

The business and management literature has attracted an increasing number of conceptual and theory building workplace spirituality and sustainable procurement studies. In contrast, this thesis collected primary data from 224 procurement professionals and is one of the first empirically based studies undertaken to investigate the relatively new phenomenon of spirituality and its relationship with sustainable procurement.

The thesis utilised two highly-reputed, reliable and robust scales (Human Spirituality Scale and Purchasing Social Responsibility scale) to measure spirituality and sustainable procurement. The reliability and internal consistency of the scales are reported in this

thesis which confirmed that both the scales are highly reliable. This thesis stands on pre-test, pilot study and main study and adopts a quantitative research framework. It employs a survey for collecting quantitative data; and the response rate for the main study is considerably high, with a total of 224 procurement professionals from 39 total Australian universities surveyed. Thus, the adoption of the survey was considered appropriate because the main study observed the response rate of 44.50 % which is above the accepted 20% for postal surveys.

The lack of studies using quantitative techniques, particularly in the workplace spirituality literature, positions this quantitative thesis uniquely within the literature, thereby strengthening its contributions to the field of spirituality, and sustainable procurement. The workplace spirituality literature, particularly in the business and management disciplines from 2005–2011 outlined the reasons why workplace spirituality should be empirically tested. Consequently, this thesis undertook this challenge by empirically investigating the relationship between spirituality and sustainable procurement, while also noting the limitations of this methodology.

6.6: Limitations

As with any quantitative study utilising statistical methods, the researcher acknowledges the shortcoming of Pearson correlation, ANOVA and t-test deployed in this thesis. Whilst, the relationship is confirmed between the dimensions of spirituality and sustainable procurement, it does not inform the reasons influencing the relationship. Although a significant relationship was confirmed between the dimensions of spirituality and sustainable procurement within the Australian higher education sector, this thesis is

subject to the typical limitations of quantitative research, cross-sectional research, and surveys.

The other limitation of this thesis is that it employed quantitative methodology based on research questions and not hypotheses. Consequently, its findings are limited to quantitative analysis, particularly correlation analysis, analysis of variance and t-test. Although, the thesis used two highly-reputed and reliable scales, there were no extra questions that enquired about spirituality and sustainable procurement. It is possible that the population frame would have found it difficult to differentiate between 'Very Good' and 'Good' and a response could mark neutrality; but there were no comments and remarks of this kind. There is also a potential limitation of biased survey answers which may not reflect the accurate perception of the participant. However, future studies can use mixed-method research to conduct spirituality and sustainable procurement research to investigate this further.

The quantitative results of this thesis are limited in nature as they provide numerical descriptions of the relationship between spirituality and sustainable procurement. It does not provide narrative information of procurement professionals' perceptions of the spirituality and sustainable procurement relationship. The quantitative results can be too abstract, although they are independent of the researcher's bias. The researcher believes that the limitations of statistical techniques do exist; but the contribution of this thesis lies in the successful confirmation of the relationship between spirituality and sustainable procurement and the disclosure of the demographic characteristics of procurement professionals in the Australian higher education sector. The empirical investigation of this relationship is the overarching requirement of the literature so that future studies can

explore this in a clear and comprehensive manner that would benefit the understanding of the relationship between spirituality and sustainable procurement.

6.7: Future Research

This thesis suggests several avenues for future research. The research could be extended in the public and private sector, and there is a considerable scope for undertaking comparative procurement research within the Australian and International universities. This thesis primarily focused on the procurement professionals, but future studies can study spirituality within other professional groups, such as accountants, government employees and financial planners. Further research can also investigate the spirituality and sustainable procurement relationship using qualitative and mixed methodology. Alternatively, it could also focus on a range of workplace spirituality perspectives and its potential for climate change, diverse workplace ethical issues, and community development. Future studies could also explore the ways in which long-term employees differ in their perceptions of spirituality from recent employees.

The interplay between spirituality and ethics provides strong evidence for the existence of a spiritual-ethical relationship, which can provide concrete solutions to the practitioners of ethics in the industry and academia. Although this thesis does not provide the dynamic phenomenon and contextual factors that influence spirituality and may be investigated by future studies, it does pave the way for future sustainable procurement studies to extend and investigate its constructs with spirituality. This thesis also has implications for sustainability scholars who approach the sustainability crisis by integrating social and wellbeing dimensions.

Further research may more rigorously explore the multi-sector workplace spirituality research in the finance domain as there is no investigation of spirituality from the financial perspective. Workplace spirituality has a considerable amount of scope in developing a rigorous instrument that measures spirituality for organisational settings. The literature notes that confusion exists in relation to spirituality, as the different types of spirituality, such as workplace spirituality, organisational spirituality, spirituality at work, and spiritual organisations, are not addressed. It would be interesting to note how workplace employees differ or agree in their perceptions of the range of spirituality synonyms.

Future sustainable procurement studies in the Australian higher education sector may like to study the carbon emissions of Australian universities as this will pave the way for universities in the developing and underdeveloped countries and eventually contribute to the environmental wellbeing of this planet.

6.8: Summary

This thesis achieved its objectives by investigating the relationship between the dimensions of spirituality and sustainable procurement within the Australian higher education sector. A quantitative approach was undertaken to investigate the research questions, and the findings of the data analysis showed that demographic characteristics of procurement professionals share a significant relationship between the dimensions of spirituality and sustainable procurement. This thesis introduced a new in-depth understanding about the relationship between spirituality and sustainable procurement and can be seen as a pioneer in its exploration of this new focus in the literature. With this, the thesis provides a major contribution to extending the conceptual studies in the

spirituality and sustainable procurement fields and provides significant evidence that the dimensions of spirituality are related with sustainable procurement.

REFERENCES

Abdullah AGK, Alzaidiyeen NJ and Aldarabah IT 2009, 'Workplace spirituality and leadership effectiveness among educational managers in Malaysia', in *European Journal of Social Sciences*, Vol 10 (2), pp. 304–316.

Acs ZJ, Audretsch DB, Braunerhjelm P and Carlsson B 2008, 'The knowledge spillover theory of entrepreneurship', in *Small Business Economics*, Vol 32 (1), pp. 15–30.

Allen NJ and Meyer JP 1990, 'The measurement and antecedents of affective, continuance and normative commitment to the organisation', in *Journal of Occupational Psychology*, Vol 63, pp. 1–18.

Allevato E and Marques J 2011, 'Systemic thinking from a scientific and spiritual perspective: Toward a new paradigm and eco world order', in *Journal of Global Responsibility*, Vol. 2 (1), pp. 23–45.

Aponte HJ 2002, 'Spirituality: The heart of therapy', in *Journal of Family Therapy*, Vol. 13, pp. 13–27.

Aschhoff B and Sofka W 2008, 'Innovation on demand. Can public procurement drive market success of innovations?' in *Research Policy*, Vol 38(3), pp. 1235–47.

Ashar H and Lane-Maher M 2004, 'Success and spirituality in the new business paradigm', in *Journal of Management Inquiry*, Vol 13(3), pp. 249.

Ashmos DP and Duchon D 2000, 'Spirituality at work: A conceptualisation and measure' in, *Journal of Management Inquiry*, Vol 9 (2), pp. 134–145.

Australian Universities Procurement Consortium, 2010
[http://www.hes.edu.au/resources/1491/AUPC%20Background%20Paper%20\(HES%2022968\).pdf](http://www.hes.edu.au/resources/1491/AUPC%20Background%20Paper%20(HES%2022968).pdf) viewed on 28 June, 2010.

Babbie ER 2007, *The practice of social research*, 11th edn. Thomson Wadsworth, Belmont, California.

Bacchus DNA and Holley LC 2004, 'Spirituality as a coping resource: The experience of professional black women', in *Journal of Ethnic Diversity in Social Work*, Vol 13 (4), pp. 65–84.

Backstrom, CH and Hursch GD 1963, 'Survey research,' in SD Hunt, RD Sparkman and JB Wilcox 1982, 'The pretest in survey research: Issues and preliminary findings', in *Journal of Marketing Research*, Vol 11, pp. 269–273.

Bahai Topics 1998, *Valuing spirituality in development*, <http://info.bahai.org/article-1-8-1-5.html#III> viewed on 5 May, 2010.

Baker S 2006, *Sustainable development*, Routledge, London.

Balagangadhara SN 2010, 'Spirituality in management theories: A perspective from India', in Nandram SS and Borden ME 2010, *Spirituality and business: Exploring possibilities for a new management paradigm*, Springer, New York.

Banks R 1980, 'Health and the spiritual dimension: Relationships and implications for professional preparation programs', in *The Journal of School Health*, Vol 50 (4), pp. 195–202.

Barrett R 1998, 'Liberating the corporate soul', in H Ashar and M Lane-Maher 2004, 'Success and spirituality in the new business paradigm', in *Journal of Management Inquiry*, Vol 13 (3), pp. 249–260.

Beagrie, S 2005, 'How to ... be an authentic leader', in *Personnel Today*, p. 31.

Beazley H 1998, *Meaning and measurement of spirituality in organisational settings: Development of spirituality assessment scale*, Doctoral Dissertation, The George Washington University, Washington.

Benefiel M 2010, 'Methodological issues in the study of spirituality at work', in SS Nandram and ME Borden 2010, *Spirituality and business*, Springer-Verlag, Berlin, Heidelberg.

Benefiel M 2008, *The soul of a leader: finding your path to fulfilment and success*, Cross Road, New York, NY.

Benefiel M 2007, 'Pathfinders and Trailblazers', in *Managerial Finance*, Vol 33 (12), pp. 947–956.

Benson J and Clark F 1982, 'A guide for instrument development and validation', in *American Journal of Occupational Therapy*, Vol 36, pp. 789–800.

Bhunia A and Das A 2012, 'Explore the impact of workplace spirituality on motivations for earnings management: An empirical study', in *International Journal of Scientific and Research Publications*, Vol 2 (2), pp. 194–201.

Bierly PE, Kessler EH and Christensen EW 2000, 'Organisational learning, knowledge and wisdom', in *Journal of Organisational Change Management*, Vol 13(6), pp. 595–618.

Blot de P 2010, 'Innovation of management in a crisis: The spiritual power', in SS Nandram and MS Borden (eds.), *Spirituality and business*, Springer, Germany.

Bolman LG and Deal TE 1995, 'Heading with soul: An uncommon journey of spirit', in H Ashar and M Lane-Maher 2004, 'Success and spirituality in the new business paradigm', *Journal of Management Inquiry*, Vol 13 (3), pp. 249.

Bouma GD 2002, *The research process*, Oxford University Press, 4th edn., Melbourne.

Bowen F, Cousins P, Lamming R and Faruk, A 2001a, 'Horses for courses: Explaining the gap between the theory and practice of green supply' in H Walker and W Phillips 2006, *Sustainable Procurement: Emerging issues*, International Public Procurement Conference Proceedings, 21–23 September.

Bowen F, Cousins P, Lamming R and Faruk, A 2001b, 'The role of supply management capabilities in green supply. Production and operations management', in H Walker and W Phillips 2006, *Sustainable procurement: Emerging issues*, International Public Procurement Conference Proceedings, 21–23 September.

Brammer S and Walker H 2007, *Sustainable procurement practice in the Public Sector: An international comparative study*, University of Bath, School of Management, Working Paper Series, 2007, pp. 16.

Brammer S and Walker H 2011, 'Sustainable procurement in the public sector: An international comparative study', in *International Journal of Operations and Production Management*, Vol 31(4), pp. 452–476.

Brandt, E.1996. Corporate pioneers explore spirituality. HR Magazine, April: 83.

Briskin A 1996, 'The stirring of the soul in the workplace', in H Ashar H and M Lane-Maher 2004, 'Success and spirituality in the new business paradigm', in *Journal of Management Inquiry*, Vol 13(3), pp. 249.

Bromet EJ, Dew MA and Parkinson DK 1990, 'Spillover between work and family: A study of blue-collar working wives', in CL Jurkiewicz and RA Giacalone 2004, 'A values for measuring the impact of workplace spirituality on organisational performance', *Journal of Business Ethics*, Vol 49(2), pp. 129–142.

Brown K, Ling S, Bradly L, Lingard H and Towswnd K 2009, 'What about me? Avoiding fatigue and gaining personal time in the work to leisure transition', in *Work-Life Balance Initiatives*, ANZAM 2009 conference, <http://eprints.qut.edu.au/29132/1/c29132.pdf>, viewed on 5 May, 2010.

Brown ME, Trevino LK and Harrison DA 2005, 'Ethical leadership: A social learning perspective for construct development and testing', in *Organisational Behavior and Human Decision Processes*, 97, pp. 117–134.

Brown RB 2003, 'Organisational spirituality: The sceptic's version', in *Organisation*, Vol 10(2), pp. 393–400.

Browne, C, Ginnever L, Pearson, S and Berman T. 2004. Commodity sustainability briefing documents, Environment Agency, accessed at http://www.environment-agency.gov.uk/static/documents/Business/Sustainable_Procurement_Product_Guidance.pdf on 25 June 2012.

Bruce S 1996, *Religion in the modern world*, Oxford University Press, Oxford.

Brühlhart M and Trionfetti F 2004, 'Public expenditure, international specialisation and agglomeration,' in *European Economic Review*, Vol 48 (4), pp. 851–881.

- Bryman, A 1988, *Quantity and quality in social research*, Routledge, London.
- Bubna-Litic D 2009, 'Introduction', in D Bubna-Litic, *Spirituality and corporate social responsibility: Interpenetrating world*, Gower Publications, Great Britain, pp. 11.
- Burack E 1999, 'Spirituality in the workplace', in F Karakas 2009, 'Spirituality and performance in organisations: A literature review', in *Journal of Business Ethics*, Vol 94, pp. 89–106.
- Burns N, Grove SK 1997, *The practice of nursing research: Conduct, critique, and utilisation*, 3rd edn., WB Saunders, Philadelphia.
- Butts D 1999, 'Spirituality at work: An overview', in *Journal of Organisational Change Management*, Vol 12 (4), pp. 328–331.
- Byggeth, S and Hochschorner, E 2006, 'Handling trade-offs in ecodesign tools for sustainable product development and procurement', in *Journal of Cleaner Production*, Vol 14 (15–16), pp. 1420–1430.
- Cacioppe R 2000, 'Creating spirit at work: Re-visioning organisation development and leadership-Part 1', in *The Academy of Management Executive*, Vol 21 (1/2), pp. 48–54.
- Cairncross F 1992, 'How Europe's companies reposition to recycle', in CR Carter, LM Ellram and KJ Ready 1998, 'Environmental purchasing: Benchmarking our German counterparts', in *Journal of Supply Chain Management*, Vol 34 (4), pp. 28–38.
- Callicott JB and Ames RT 1989, *Introduction: The Asian traditions as a conceptual resource for environmental philosophy*, <http://www.sunypress.edu/PDF/50659.pdf> viewed on, 16 July 2011.
- Canda E 1988, 'Spirituality, religious practise and social work practice', in *Social CaseWork*, Vol 69 (4), pp. 238–247.
- Cannon MD and Edmondson AC 2005, 'Failing to Learn and Learning to Fail (Intelligently): How Great Organisations Put Failure to Work to Innovate and Improve,' *Long Range Planning* 38 (2005) 299-319.
- Carrette J and King R 2004, *Selling spirituality: The silent takeover of religion*, Routledge, New York.
- Carroll JE 2004, *Sustainability and spirituality*, State University of New York Press, Albany.
- Carter CR 2005, 'Purchasing social responsibility and firm performance', in *International Journal of Physical Distribution & Logistics Management*, Vol 35 (3), pp. 177–194.
- Carter CR and Carter JR 1998, 'Inter-organisational determinants of environmental purchasing: Initial evidence from the consumer products industries', in H Walker and W Phillips 2006, *Sustainable procurement: Emerging issues*, International Public Procurement Conference Proceedings, 21–23 September.

Carter CR and Jennings MM 2002, 'Social responsibility and supply chain relationships', in *Transportation Research Part E: Logistics and Transportation Review*, Vol 38 (1), pp. 37–52.

Carter CR and Jennings MM 2004, 'The role of purchasing in corporate social responsibility: A structural equation analysis' in *Journal of Business Logistics*, Vol 25(1), pp. 145-190.

Carter CR, Ellram LM and Ready K 1998, 'Environmental purchasing: Benchmarking our German counterparts', in H Walker and W Phillips 2006, *Sustainable Procurement: Emerging issues*, International Public Procurement Conference Proceedings, 21–23 September.

Carter CR, Kale, R and Grimm, CM 2000, 'Environmental purchasing and firm performance: An empirical investigation', in H Walker and W Phillips 2006. 'Sustainable procurement: Emerging issues', International Public Procurement Conference Proceedings, 21–23 September.

Carver-Sekeres D 2008, 'Balancing the mission and the market: Christian children books for tweens', in Jrossman 2010, 'Conceptualising spiritual leadership in secular organisational contexts and its relation to transformational, servant and environmental leadership', in *Leadership & Organisational Development Journal*, Vol 31 (7), pp. 596–606.

Cash KC, George RG and Rood SA 2000, 'A framework for accommodating religion and spirituality in the workplace' .The Academy of Management Executive 14: 124–34.

Case P and Gosling J 2010, 'The spiritual organisation: Critical reflections on the instrumentality of workplace spirituality', in *Journal of Management, Spirituality & Religion*, Vol 7 (4), pp. 257–282.

Cavanagh GF 1999, 'Spirituality for managers: Context and critique', in *Journal of Organisational Change Management*, Vol 12 (3), pp. 186–199.

Cavanagh GF and Bandsuch MR 2002, 'Virtue as a benchmark for spirituality in business,' in *Journal of Business Ethics*, Vol 38 (1–2), pp. 109–117.

Cavanagh G, Hanson B, Hanson, K and Hinojoso J 2001, 'Business leadership and spirituality', in AL Delbecq and JJ McGee. (eds.), *Bridging the gap: Spirituality and business*.

CBC News 2006, *Tuition fees: The higher cost of higher education*, <http://www.cbc.ca/news/background/higher-education/> viewed on 10 September 2011.

Chancellor E 2002, 'Perverse incentives', in *Prospect*, June, pp. 28–33.

Chen CC 2005, 'Incorporating green purchasing into the frame of ISO 14000' in H Walker and W Phillips 2006, *Sustainable Procurement: Emerging issues*, International Public Procurement Conference Proceedings, 21–23 September.

Ciancutti A and Steding T 2000, 'Trust fund', in H Ashar and M Lane-Maher 2004, 'Success and spirituality in the new business paradigm', *Journal of Management Inquiry*, Vol 13 (3), pp. 249.

Cohen JW 1988, 'Statistical power analysis for the behavioural sciences', in J Pallant 2009. *SPSS Survival Manual: A step by step guide to data analysis using SPSS*, 2edn, Allen & Unwin, NSW, Australia.

Colclough G and Tinholt D 2008, *8th benchmark measurement*, Capgemini Worldwide.

Commonwealth Procurement Guidelines 2008, Department of Finance and Deregulation, <http://www.finance.gov.au/publications/fmg-series/docs/CPGs-2008.pdf> viewed on 12 July, 2011.

Cormack DS 1991, *The research process*. Black Scientific, Oxford.

Conger JA 1995, 'Moved by the spirit: Leadership and spirituality in the workplace', in *OD Practitioner* 27, no 1, pp. 46–51.

Corner PD 2009, 'Workplace spirituality and business ethics: Insights from an eastern spiritual tradition', in *Journal of Business Ethics*, Vol 85, pp. 377–389.

Cotton S, Kudel I, Roberts YH et al. 2009, 'Spiritual well-being and mental health outcomes in adolescents with or without inflammatory bowel disease', in *Journal of Adolescent Health*, Vol 44 (5), pp. 485–492.

Cousins PD, Lawson B, Squire B 2006, 'An empirical taxonomy of purchasing functions', in *International Journal of Operations & Production Management*, Vol. 26 (7), pp. 775–794.

Cortese AD 2003, 'The critical role of higher education in creating a sustainable future', in *Planning for Higher Education*, Vol 31 (3), pp. 15–22.

Creswell, J 2003, *Research design: qualitative, quantitative, and mixed method approaches* 2edn, Sage Publications, Thousand Oaks, Calif.

Creswell JW 2008, *Research design*, 3rd edn., Sage Publications, Singapore.

Creswell JW 2009, *Research design: Qualitative, quantitative and mixed methods approaches*, Sage Publications, Singapore.

Creswell, J & Clark, P 2007, *Designing and conducting mixed methods research* SAGE Publications, Thousand Oaks, California.

Creswell, J & Tashakkori 2007, 'Editorial: Differing Perspectives on Mixed Methods Research', *Journal of Mixed Methods Research*, vol. 1, no. 4, pp. 303-8.

Crohan SE, Antonucci TC, Adelman PK and Coleman LM 1989, 'Job characteristics and well being at midlife: Ethnic and gender comparisons', in CL Jurkiewicz CL and RA

Giacalone 2004, 'Values for measuring the impact of workplace spirituality on organisational performance', in *Psychology*, Vol 49 (2), pp. 129–142.

Cronbach LJ 1951, 'Coefficient alpha and the internal structure of a test', in *Psychometrika*, Vol 16, pp. 297–334.

Crossman J, 2003, 'Secular/spiritual development in education from international and global perspectives', in *Oxford Review of Education*, Vol. 29 (4), pp. 503–19.

Crossman J 2010, 'Conceptualising spiritual leadership in secular organisational contexts and its relation to transformational, servant and environmental leadership', *Leadership and Organisational Development Journal*, Vol 31(7), pp. 595–608.

Crotty M 1988, *The foundations of social research: Meaning and perspective in the research process*, Allen & Unwin, Sydney, Australia.

Curkovic S 2003, 'Environmentally responsible manufacturing: The development and validation of a measurement model', in H Walker and W Phillips 2006, *Sustainable procurement: Emerging issues*, International Public Procurement Conference Proceedings, 21–23 September.

Dalai Lama XIV 1999, *Ethics for the new millennium*, Putman, New York.

Dalaney C 2005, 'The Spirituality Scale', *Journal of Holistic Nursing*, Vol 23 (2), pp. 145–167.

Daniel JL 2010, 'The effect of workplace spirituality on team effectiveness', in *Journal of Management Development*, Vol 29 (5), pp. 442–456.

Dasgupta R 2011, 'Workplace spirituality', *Sunday Chronicle* in *Decan Chronicle*, <http://www.deccanchronicle.com/tabloid/sunday-chronicle/other-realm/workplace-spirituality-639> viewed on 15 August 2010.

Dawson GF and Probert EJ 2007, 'A sustainable product needing sustainable procurement commitment: The case of green waste in Wales', in *Sustainable Development*, Vol 15, pp. 69–82.

Day GS and Wensley R 1983, 'Marketing theory with a strategic orientation', in CR Carter, LM Ellram and KJ Ready 1998, 'Environmental purchasing: Benchmarking our German counterparts', in *International Journal of Purchasing and Materials Management*, Vol 34(4), pp. 28–38.

Dean LK and Fornaciari CJ 2007, 'Empirical research in management, spirituality and religion during its founding years', in *Journal of Management Spirituality and Religion*, Vol 16 (4), pp. 378–395.

DEFRA 2006, Procuring the future—The Sustainable Procurement Task Force National Action Plan, <http://www.sustainabledevelopment.gov.uk/publications/procurement-action-plan/documents/full-document.pdf> viewed on 7 September 2007.

Dehler G and Welsh M 1994, 'Spirituality and organisational transformation: Implications for the new management paradigm', in EB Dent, ME Higgins and DM Wharf 2005, 'Spirituality and leadership: An empirical review of definitions, distinctions and embedded assumptions', in *The Leadership Quarterly*, Vol 16, pp. 625–653.

Dehler GE and Welsh MA 1994, 'Spirituality and organisational transformation: Implications for the new management paradigm', in *Journal of Managerial Psychology*, Vol 19 (6), pp. 17–26.

Dehler GE and Welsh MA 2003, 'The experience of work: Spirituality and the new workplace', in CL Giacalone and CL Jurkiewicz CL 2003, *Handbook of workplace spirituality and organisational performance*, ME Sharpe, Armonk, NY.

DeKlerk JJ 2005, 'Spirituality, meaning in life, and work wellness: A research agenda', in *International Journal of Organisational Analysis*, Vol 13 (1), pp. 64–88.

Delbecq AL 2003, 'Business leadership as a spiritual calling: Pedagogical approaches and spiritual journeys of Silicon Valley MBAs',
<http://www.stthomas.edu/cathstudies/cst/conferences/bilbao/papers/Delbecq.pdf>, viewed on 21 May, 2011.

Dent EB, Higgins ME and Wharf DM 2005. 'Spirituality and leadership: An empirical review of definitions, distinctions and embedded assumptions', in *The Leadership Quarterly*, Vol 16, pp. 625–653.

de Vaus DA 2001, *Research design in social research*, Sage, London.

de Vaus, DA 2002, *Social surveys*, 1st edn., Vol 1, Sage, London.

Department of Education USA 2011 <http://www.ed.gov/> viewed on 10 September 2011.

Despande A 2012, 'Workplace spirituality, Organisational learning capabilities and Mass Customization: An integrated framework' *International Journal of Business and Management*, Vol 7(5).

Diener, E 1984, 'Subjective well-being' in *Psychology Bulletin*, Vol. 95, pp. 542–575.

Dillman D 1978, *Mail and telephone surveys: The total design method*, John Wiley, New York.

Drucker P 1988, 'Teaching the work of management', in *New Management*, Vol 6, pp. 2–6.

Duchon D and Plowman D 2005, 'Nurturing the spirit at work: Impact on work unit performance', in *The Leadership Quarterly*, Vol 16, pp. 807–833.

Dunphy D 2009, 'In search of the future: Notes for spiritual adventures', in D Bubna-Litic 2009, *Spirituality and corporate responsibility: Interpenetrating worlds*, Gower Publication, Great Britain.

Duffy ME 1985, 'Designing research the qualitative–quantitative debate', in *Journal of Advanced Nursing*, Vol 11 (3), pp. 225–232.

Duffy ME 1986, 'Methodological triangulation a vehicle for merging quantitative and qualitative methods', in *Image*, Vol 19 (3), pp. 130–133.

Dwyer JW, Clarke LL and Miller MK 1990, 'The effect of religious concentration and affiliation on county cancer mortality rates', in JJ Mytko and SJ Knight 1999, 'Body, mind and spirit: Towards the integration of religiosity and spirituality in cancer quality of life research', in *Psycho-Oncology*, Vol 8, pp. 439–450.

ECCG 2007, 'Sustainable procurement in the European Union: Proposals and recommendations to the European commission and the European parliament', in S Brammer and H Walker 2007, *Sustainable procurement practice in the public sector: An international comparative study*, Working paper series, University of Bath.

Eckersley R 1999, 'The view from a cave: science, spirituality and meaning', in Smith NR (2006, *Workplace spirituality: A complete guide for business leaders*, Axial Age Publishing, Massachusetts.

Edler J and Georghiou L 2007, 'Public procurement and innovation—Resurrecting the demand side', in *Research Policy*, Vol 36 (7), pp. 949–963.

Efraty D, Sirgy MJ and Siegel, PH 1997, 'The job satisfaction/life satisfaction relationship for professional accountants: The moderating effect of organisational commitment', in CL Jurkiewicz and RA Giacalone 2004, 'Values for measuring the impact of workplace spirituality on organisational performance', in *Journal of Business Ethics*, Vol 49 (2), pp. 129–142.

Einstein A 1950, 'The famous quote', in T Thakadipuram 2009, *The quest for wholeness: An inquiry into spiritual leaders' lived experience*, UMI Microform 3351309. Ann Arbor, MI: ProQuest LLC.

Eisner R and Montuori A 2003, 'The Human side of Spirituality', in CL Giacalone and CL Jurkiewicz, 2003, *Handbook of workplace spirituality and organisational performance*, ME Sharpe, Armonk, NY.

Ellison CW 1983, 'Spiritual well being: Conceptualisation and measurement', in JJ Mytko and SJ Knight 1999, 'Body, mind and spirit: Towards the integration of religiosity and spirituality in cancer quality of life research', in *Psycho-Oncology*, Vol 8, pp. 439–450.

Elsen A 1998, 'Sustainable development research at the university of Amsterdam', in H van Weenen 2000, 'Towards a vision of a sustainable university', in *International Journal of Sustainability inn Higher Education*, Vol 1 (1), pp. 20–34.

EMG 2004, Group (EMG) 8th, Meeting of the Environmental Management Group, UNEP Headquarters, Gigiri, Nairobi, Kenya, 1 September 2004, *Background paper on sustainable procurement and environmental management programmes for the UN system*, http://www.unemg.org/Portals/27/Documents/MeetingsDocs/IMG/SusProc/DOC_8_7.pdf viewed on 15 April 2011.

Emiliani ML 2004, 'Is management education beneficial to society?', in HL Walker, S Gough, EF Bakker, LA Knight and D McBain 2009, 'Greening operations management: An online sustainable procurement course for practitioners', in *Journal of Management Education*, Vol 33 (3), pp. 348–371.

Emmons RA 2000, 'Is spirituality an intelligence? Motivation, cognition, and the psychology of ultimate concern', in CL Jurkiewicz and RA Giacalone 2004, 'A values for measuring the impact of workplace spirituality on organisational performance' *Journal of Business Ethics*, Vol 49 (2), pp. 129–142.

Endyke PD 1999, A revision of the spiritual–well-being scale, PhD Dissertation George Fox University, AAT 9940445.

Erdmenger C, Eri V, Fuhr V, Lackner B, Schmid A, van der Grijp N 2001, *The world buys green— International survey on national green procurement practices*, http://www.procuraplus.org/fileadmin/template/projects/procuraplus/files/Intranet_Publications/Topics/Important_studies/TheWorldbuysgreen_www.pdf viewed on 15 February, 2011.

Erridge A and Henningan S 2007, 'Public procurement and social policy in Northern Ireland: The unemployment pilot project', in P Piga and KV Thai (eds), *Advancing public procurement: Practices, innovation and knowledge-sharing*, PrAcademics Press, Boca Raton, FL.

Evans T, Evans B and Marsh H 2008, 'Doctoral education in Australasia', in Merad and M Heggelund 2008, *Toward a global Phd*, Centre for Innovation and Research in Graduate Education, University of Washington.

Exline JJ and Bright DS 2011, 'Spiritual and religious struggles in the workplace', in *Journal of Management Spirituality and Religion*, Vol 8 (2), pp. 123–142.

Fairholm G 1996, 'Spiritual leadership: Fulfilling whole self needs at work', in *Leadership and Organisational Development*, Vol 20 (4), pp. 874–907.

Fairholm, G. W. (1997). *Capturing the heart of leadership: Spirituality and community in the new American workplace*. Westport, CT: Praeger.

Fairholm, G. W., (1998). *Perspectives on leadership: From the science of management to its spiritual heart*. Westport. CT: Praeger.

Fawcett SE, Brau JC, Rhoads GK and Whitlark D 2008, 'Spirituality and organisational culture: Cultivating the ABCs of an inspiring workplace', in *International Journal of Public Administration*, Vol 31 (4), pp. 420–438.

Ferguson L 2009, 'Workplace spirituality: Aligning gifts, purpose and passion' in J Marques S Dhiman and R King 2009, *The workplace and spirituality: New perspective on research and practice*, Skylights Paths Publishing, Vermont.

Fernando M 2005, *Self-actualising workplace spirituality: An empirical study*, 65th Annual Academy of Management Conference (AoM), Hawaii.

Fernando M, Beale F and Geroy GD 2009, 'The spiritual dimension in leadership at Dilmah Tea', in *Leadership and Organisation Development Journal*, Vol 30 (6), pp. 552–539.

Fernando M, Dharmage S and Almeida S 2007, 'Ethical ideologies of senior Australian managers: An empirical study', in *Journal of Business Ethics*, Vol 82, pp. 145–155.

Fernando M and Jackson B 2006, 'The influence of religion-based workplace spirituality on businessleaders' decision-making: An inter-faith study', in *Journal of Management and Organisation*, Vol 12 (1), pp. 23–39.

Fidel R 2008, 'Are we there yet? Mixed methods research in library and information science', in *Library and Information Science Research*, Vol 30 (4), pp. 265–272.

Fornaciari CJ and Dean KL 2009, 'Foundations, lessons and insider tips for MSR research', in *Journal of Management Spirituality and Religion*, Vol 6 (4), pp. 301–321.

Fornaciari CJ and Lund DK 2001, 'Making the qunatum leap: Lessons from physics on studying spirituality and religion in organisations', in *Journal of Organisational Change Management*, Vol 14 (4), pp. 335–351.

Fornaciari CJ, Sherlock JJ, Ritchie WJ and Dean KL 2005, 'Scale development practices in the measurement of spirituality', in *Internal Journal of Organisational Analysis*, Vol 13 (1), pp. 28–49.

Fossgard-Moser T 2003, 'Promoting sustainable development through the enhancement of local employment and supply chain opportunities generated by energy companies: The case of the shell group', in *Greener Management Journal*, Vol 43, pp. 79–92.

Fox M 1994, *The reinvention of work: A new vision of livelihood for our time*, Harper San Francisco, San Francisco, CA.

Franz RS and Wong KL 2005, 'Spirituality and management: A wider lens: A comment on D. Steingard's "Spiritually-Informed Management"', in *Journal of Management Inquiry*, Vol 14(3), pp. 247–250.

Freeman RE 2005, 'Forward in unfolding stakeholder thinking', in Smith NR, 2006, *Workplace Spirituality: A Complete guide for business leaders*, Axial Age Publishing, Massachusetts.

Freshman B 1999, 'An exploratory analysis of definitions and applications of spirituality in the workplace', in *Journal of Organisational Change Management*, Vol. 12 (4), pp. 318–327.

Fry LW 2003, 'Toward a theory of spiritual leadership', in *The Leadership Quarterly*, 14, pp. 693–727.

Fry LW 2004, *Toward a theory of ethical and spiritual well being and corporate social responsibility through spiritual leadership*, paper presented at the 2004 meeting of the Academy of Management, New Orleans, Louisiana.

Fry LW, Hannah ST, Walumbwa F 2011, 'Impact of spiritual leadership on unit performance', in *The Leadership Quarterly*, Vol 22, pp. 259–270.

Fry LW and Matherly LL 2006, *Spiritual leadership and organisational performance: An exploratory study*, paper presented at the annual meeting of the Academy of Management, Atlanta, GA.

Fry, LW, Nisiewicz, M, Vitucci, S 2007, *Transforming police organisations through spiritual leadership: Measurement and establishing a baseline*. Paper presented at the National Meeting of the Academy of Management, Philadelphia, Pennsylvania.

Fry LW and Slocum JW 2008, 'Maximising the triple bottom line through spiritual leadership', in *Organisational Dynamics*, Vol 37 (1), pp. 86–96.

Fry LW, Vitucci S and Cedillo M 2005, 'Transforming the army through spiritual leadership', in *The Leadership Quarterly*, Vol 16, pp. 835–862.

Fulton RA and Carson V 1995, 'The spiritual variable', in B Neuman (ed.), *The Neuman systems model*, Appleton & Lange, East Norwalk, CT, pp. 77–91.

Gagoi P 2005, 'A little bit of corporate soul', in F Karakas 2009, 'Spirituality and performance in organisations: A literature review', in *Journal of Business Ethics*, Vol 94, pp. 89–106.

Gehrke SJ 2008, 'Leadership through meaning-making: An empirical exploration of spirituality and leadership in college students', in *Journal of College Student Development*, Vol. 49 (4), pp. 351–59.

Geng Y and Doberstein B 2008, *Greening government procurement in developing countries: Building capacity in China*, 2008 Annual statistical report on United Nations procurement, sustainable procurement supplement.

George JM and Brief AP 1990, 'The economic instrumentality of work: An examination of the moderating effects of financial requirements and sex on the pay-life satisfaction relationship', in CL Jurkiewicz and RA Giacalone 2004, A values for measuring the impact of workplace spirituality on organisational performance, *Journal of Business Ethics*, Vol 49 (2), pp. 129–142.

George LK, Larson DB, Koenig, HG and McCullough, ME 2000, 'Spirituality and health: What we know, what we need to know', *Journal of Social and Clinical Psychology*, Vol. 19, pp. 102–116.

Giacalone RA and Jurkiewicz CL 2003, 'Toward a science of workplace spirituality', in RA Giacalone and CL Jurkiewicz (eds.), *Handbook of workplace spirituality and organisational performance*, M E Sharpe. Armonk, NY, pp. 3–28.

Giacalone RA and Jurkiewicz CL 2003, 'Right from wrong: The influence of spirituality on perceptions of unethical business activities', in *Journal of Business Ethics*, Vol 46 (1), pp. 85–97.

Giacalone RA and Jurkiewicz CL 2004, 'The interaction of materialistic and post-materialistic values in predicating dimensions of personal and social identity', in *Human Relations*, Vol 57 (11), pp. 1379–1405.

Giacalone RA and Jurkiewicz CL 2010, *Handbook of workplace spirituality and organisational performance*, ME.Sharpe Inc.,. Armonk, NY:

Giacalone RA , Jurkiewicz CL and Fry LW 2004, 'From advocacy to science: The next steps in workplace spirituality research', in R Paloutzian, C Park (eds.), *Handbook of the psychology of religion and spirituality*, Sage, Newbury Park, CA, pp. 515–528.

Gibbons P 2000, *Spirituality at work: Definitions, measures, assumptions, and validity claims*, Proceedings of the Academy of Management, USA 2000.

Goertzen BJ and Barbuto JE 2001, 'Individual spirituality: A review of literature' in EB Dent, ME Higgins and DM Wharff 2005, 'Spirituality and leadership: An empirical review of definitions, distinctions and embedded assumptions', in *Leadership Quarterly*, Vol 16, pp. 625–653.

Goldstein SN 2010, 'The exploration of spirituality and identity in adolescence', in *New Scholarship in Human Services*, Vol 9 (1).

Gotsis G and Kortezi Z 2008, 'Philosophical foundations of workplace spirituality: A critical approach', in *Journal of Business Ethics*, Vol 78, pp. 575–600.

Gough S and Scott W 2007, *Higher education and sustainable development: Paradox and possibility*, Routledge Taylor & Francis Group, London.

Gough SR and Scott WAH, 2008. *Sustainable Development and Higher Education: paradox and possibility*. London: Routledge.

Grant D 2004, 'Spiritual interventions: How, when, and why nurses use them', in *Holistic Nursing Practice*, Vol 18(1), pp. 36–41.

Grant D, O'Neil K, Stephens L 2004, 'Spirituality in the workplace: New empirical directions in the study of the sacred', in *Sociology of Religion*, Vol 65 (3), pp. 265–283.

Gravetter FJ and Wallnau LB 2004, *Statistics for the behavioural sciences*, 6th edn., Thomson, Australia.

Graziano AM and Raulin ML 1993, *Research methods*, Harper Collins, New York.

Green K, Morton B and New S 1998, Green purchasing and supply policies: Do they improve companies' environmental performance?', in H Walker and W Phillips 2006, *Sustainable Procurement: Emerging Issues, International Public Procurement Conference Proceedings*, 21–23 September.

Greshon P 2004, 'Releasing resources to the frontline', in J Thomson and T Jackson T 2007, Sustainable procurement in practice: Lessons from local government', in *Journal of Environmental Planning and Management*, Vol 50 (3), pp. 421–444.

Gull GA and Doh J 2004, 'The transformation of the organisation: Toward a more spiritual workplace', in *Journal of Management Inquiry*, Vol 13 (2), pp. 128–139.

Gupta S, Bishnoi NK, Mathews C 2012 'Workplace Spirituality and Indian Ethos', in *Purushartha: A Journal of Management Ethics and Spirituality*, Vol 4, (2), pp.51-63

Haake H and Seuring S 2009, 'Sustainable procurement of minor items—exploring limits to sustainability', in *Sustainable Development*, Vol 17, pp. 284–294.

Hakim, C 1982, *Secondary analysis in social research: A guide to data sources and methods with examples*, Allen & Unwin, London.

Hakim, C 2000, *Research design: Successful design for social and economic research*, 2nd edn., Routledge, London.

Handfield R, Walton SV, Seegers LK and Melnyk SA 1997, 'Green value chain practices in the furniture industry', in H Walker and W Phillips 2006, *Sustainable Procurement : Emerging Issues, International Public Procurement Conference Proceedings*, 21–23 September.

Hanrahan P, Kibert C and Bosch G 1998, 'Greening the University of Florida' in H van Weenen 2000, 'Towards a vision of a sustainable university', in *International Journal of Sustainability in Higher Education*, Vol 1 (1), pp. 20–34.

Hardy, M & Bryman, A 2004, *Handbook of data analysis* SAGE, London.

Harlos K 2000, 'Toward a spiritual pedagogy: Meaning, practice, and applications in management education', *Journal of Management Education*, Vol 24, pp. 612–627.

Harman C 1992, '21st Century businesses: A background for dialogue', in H Ashar and M Lane-Maher 2004. 'Success and spirituality in the new business paradigm', in *Journal of Management Inquiry*, Vol 13 (3), pp. 249–260.

Harrington WJ, Preziosi RC, Gooden DJ 2001, 'Perceptions of workplace spirituality among professionals and executives', in *Employee Responsibilities and Rights Journal*, Vol 13 (3), pp. 155–163.

Hartsfield M 2003, *The spirit of transformational leadership: Emotions or cognition*, <http://www.cbfa.org/Hartsfield.pdf> viewed on 6 May 2011.

Hatch RL, Burg MA, Naberhaus DS and Hellmich LK 1998, 'The spiritual involvement and beliefs scale', in JJ Mytko and SJ Knight 1999, 'Body, mind and spirit: Towards the integration of religiosity and spirituality in cancer quality of life research', in *Psycho-Oncology*, Vol 8: pp. 439–450.

Haug IE 1998, 'Including a spiritual dimension in family therapy', in DNA Bacchus and LC Holley 2004. 'Spirituality as a coping resource: The experience of professional black women', in *Journal of Ethnic Diversity in Social Work*, Vol 13 (4) pp. 65–84.

Hawley J 1993, *Reawakening the spirit in work: The power of dharmic management*, Berrett-Koehler Publishers, San Francisco, CA.

Heaton DP, Schmidt-Wilk and Travis F 2004, 'Constructs methods, and measures for researching spirituality in organisations', *Journal of Organisational Change Management*, Vol 17 (1), pp. 62–82.

Helm L, Billiad S, Harrison K and Cavanagh J 2005, 'Sustainable procurement in central government', in HL Walker, S Gough, EF Bakker, LA Knight and D McBain 2009, 'Greening operations management: An online sustainable procurement course for practitioners', in *Journal of Management Education*, Vol 33 (3), pp. 348–371.

Hicks DA 2002, 'Spiritual and religious diversity in the workplace: Implications for leadership', in G Gotsis and Z Kortezi 2008. 'Philosophical foundations of workplace spirituality: A critical approach', in *Journal of Business Ethics*, Vol 78, pp. 575–600.

Hicks DA 2003, 'Religion and the workplace pluralism, spirituality', in G Gotsis and Z Kortezi, 2008, 'Philosophical foundations of workplace spirituality: A critical approach', in *Journal of Business Ethics*, Vol 78, pp. 575–600.

Hill PC and GS Smith 2003, 'Coming to terms with spirituality and religion in the workplace' in G Gotsis and Z Kortezi 2008, 'Philosophical foundations of workplace spirituality: A critical approach', in *Journal of Business Ethics*, Vol 78, pp. 575–600.

Hire DL 2005, 'Spirituality in educational administration: An exploratory study of public school superintendents in Ohio', in *Dissertation Abstracts International*, 66 (02), 427A, (UMI No. 3163462).

HM Treasury 2007, *Transforming government procurement*, HM Treasury, London.

Holt D 2003, 'The role and impact of the business school curriculum in shaping environmental education at Middlesex University', in HL Walker, S Gough, EF Bakker, LA Knight and D McBain 2009, 'Greening operations management: An online sustainable procurement course for practitioners', in *Journal of Management Education*, Vol 33 (3), pp. 348–371.

Hopkins WG (2008) Quantitative Research Design, Sports Science accessed from <http://www.sportsci.org/jour/0001/wghdesign.html>

Houston P and Sokolow S 2006, 'The Spiritual dimension of leadership: Eight key principles', in J Crossman 2010, 'Conceptualising spiritual leadership in secular

organisational contexts and its relation to transformational, servant and environmental leadership', in *Leadership and Organisational Development Journal*, Vol 31 (7), pp. 596–606.

Howden JW. Development and Psychometric Characteristics of the Spirituality Assessment Scale [doctoral dissertation]. Denton, TX: Texas Woman's University; 1992

Hudson 2007, 'Talent shortage hurts employers: Hudson survey', media release, <http://au.hudson.com/documents/au-emp-Talent-shortage-hurts-supply-chain-procurement-employers.pdf> viewed on 16 May 2011.

Huges C 2006, *Qualitative and quantitative approaches to social research*, http://www2.warwick.ac.uk/fac/soc/sociology/staff/academicstaff/chughes/hughesc_index/teachingresearchprocess/quantitativequalitative/quantitativequalitative/ viewed on 18 April 2011.

Humphreys P, McIvor R and Chan F 2003, 'Using case-based reasoning to evaluate supplier environmental management performance', in H Walker H and W Phillips 2006, *Sustainable procurement: Emerging issues*, International Public Procurement Conference Proceedings, 21–23 September.

Inglehart R 1977, *The silent revolution: Changing values and political styles among western publics*, Princeton University Press, Princeton.

Issa T and Pick D 2011, 'An interpretive mixed-methods analysis of ethics, spirituality and aesthetics in the Australian services sector', in *Business Ethics: A European Review*, Vol 20 (1), pp. 45–58.

Issa T and Pick D 2010 'Ethical mindsets in the Australian services sector'. *Asia Pacific Journal of Business and Management* 1: 29-42

Issa T (2009) Ethical mindsets, aesthetics and spirituality: a mixed-methods approach analysis of the Australian services sector, Doctoral Thesis, Curtin Business School.

Iyengar BKS 1990, *Light on the yoga sutras of Patanjali*, APH Publishing Corp., Delhi.

Jackson K 1999, 'Spirituality as a foundation for freedom and creative imagination in international business ethics', in *Journal of Business Ethics*, Vol 19 (1), pp. 61–70.

Jacobson S 1994, 'Spirituality and transformational leadership in secular setting: A Delphi study', unpublished doctoral dissertation, Seattle University, Seattle.

Jacques R 1996, 'Manufacturing the employee: Management knowledge from the 19th to 21st centuries', in DJ Fleming 2003, 'The perception of American employees with regards to workplace spirituality', dissertation presented for Doctor in Management, University of Phoenix, <http://www.spiritatwork.org/library/Fleming.pdf> viewed on 15 February 2010.

Javanmard H 2012, 'The impact of spirituality on work performance', in *Indian Journal of Science and Technology*, Vol 5 (1), pp. 1961–1966.

Jefferies MC, McGeorge D, Chen SE and Cadman K 2006, *Sustainable procurement: A contemporary view on Australian Public Private Partnerships (PPPs), sustainable development through culture and innovation*, 26–29 November 2006, UAE, Dubai, <http://www.baufachinformation.de/aufsatz.jsp?ul=2007081000079> viewed on 20 February 2011.

Johnson, CE 2009, 'Spirituality and ethical leadership: Moral persons and moral managers', in J Marques, S Dhiman and R King (eds.), *The workplace and spirituality: New perspectives on research and practice*, Skylight Paths, Woodstock, VT, pp. 119–28.

Johnson RB and Onwuegbuzie AJ 2004, 'Mixed methods research: A research paradigm whose time has come', in *Educational Researcher*, Vol 33 (7), pp. 14–26.

Joseph LC 2008, *Exploring the reliability and validity of the human spirituality scales scores with older adults in independent living facilities*, Master's Thesis, Mississippi State University, <http://www.openthesis.org/documents/Exploring-reliability-validity-human-spirituality-245206.html> viewed on 2 June 2011.

Jordon S 2006, 'Taking issue with the economist's CSR issue', in NR Smith, *Workplace spirituality: A complete guide for business leaders*, Axial Age Publishing, Massachusetts.

Joseph, M 1988, 'Religion and social work practice', in *Social Casework*, Vol 69, pp. 443–452.

Joyner, B and Payne D 2002, 'Evolution and implementation: A study of values, business ethics and corporate social responsibility', in *Journal of Business Ethics*, Vol 41, pp. 297–311.

Jurkiewicz CL and Giacalone, RA 2004, 'A values framework for measuring the impact of workplace spirituality on organisational performance', in *Journal of Business Ethics*, Vol 49, pp. 129–142.

Kahnweiler W and Otte FL 1997, 'In search of the soul of the HRD', in RA Giacalone and CL Jurkiewicz 2003, *Handbook of Workplace Spirituality and Organisational Performance*, ME Sharpe, London.

Karakas F 2009, 'Spirituality and performance in organisations: A literature review', in *Journal of Business Ethics*, Vol 94, pp. 89–106.

Katz FE 1965, 'Explaining informal work groups in complex organisations: The case for autonomy in structure', in *Administrative Science Quarterly*, Vol 10 (2), pp. 204–223.

Kazemipour F, Mohamad AS, Pourseidi B 2012 'Relationship between Workplace Spirituality and Organisational Citizenship Behavior Among Nurses Through Mediation of Affective Organisational Commitment'. *Journal of Nursing Scholarship*, Vol 44 (3), pp 302-310

Kelly M and Alam M 2009, 'Educating accounting students in the age of sustainability', in *Australasian Accounting Business and Finance*, Vol 3 (4), pp. 30–44.

Kennard M 2006, *Sustainable procurement*, XXIII FIG Congress, 8–13 October, http://www.fig.net/pub/fig2006/papers/ts08/ts08_03_kennard_0843.pdf viewed on 16 May 2011.

King AA and Lennox MJ 2001, 'Lean and green? An empirical examination of the relationship between lean production and environmental performance', in H Walker and W Phillips 2006, *Sustainable procurement: Emerging issues*, International Public Procurement Conference Proceedings, 21–23 September.

King S, and Nicol DM 1999, 'Organisational enhancement through recognition of individual spirituality: Reflections of Jaques and Jung, in *Journal of Organisational Change Management*, Vol.12 (3), pp.234–42.

Kinjerski VM and Skrypnek BJ 2004, 'Defining spirit at work: Finding common ground', in *Journal of Organisational Change Management*, Vol 17 (1), pp. 26–42.

Kinsley D 1995, 'Ecology and religion: Ecological spirituality in cross cultural perspective', in Y Narayanan 2008, 'In a city like Delhi: Sustainability and spirituality', PhD thesis, Murdoch University, Perth, Western Australia.

Klassen RD and Johnson PF(2004) The green supply chain in Walker H & Phillips W (2006) *Sustainable Procurement : Emerging Issues*, International Public Procurement Conference Proceedings, 21-23 September

Klenke K 2003, 'The S factor in leadership education, practice and research', in *Journal of Education for Business*, Vol 79 (1), pp. 55–60.

Klerk JJD 2005, 'Spirituality, meaning in life and work wellness: A research agenda', in *The International Journal of Organisational Analysis*, Vol 13 (1), pp. 64–88.

Kolodinsky RW, Giacalone RA and Jurkiewicz CL 2008, 'Workplace values and outcomes: exploring personal, organisational, and interactive workplace spirituality' in *Journal of Business Ethics*, Vol 81, pp. 465–80.

Konz G and Ryan F 1999, 'Maintaining an organisational spirituality: No easy task', in F Karakas 2009, 'Spirituality and performance in organisations: A literature review', *Journal of Business Ethics*, Vol 94, pp. 89–106.

Korac-Kakabadse N, Kouzmin A and Kakabadse A 2002, 'Spirituality and leadership praxis', in *Journal of Managerial Psychology*, Vol 17 (3), pp. 165–82

Korten DC 1995, 'When corporations rule the world', in PE Bierly, EH Kessler and EW Christensen 2000, 'Organisational learning, knowledge and wisdom', in *Journal of Organisational Change Management*, Vol 13 (6), pp. 595–618.

Kotze J, Johnson CA, O'Hara RB, Vepsäläinen K and Fowler MS 2004, 'Editorial: The Journal of negative results in ecology and evolutionary biology', in *Journal of negative results*, Vol 1, pp. 1–5.

Krahnke K, Giacalone RA and Jurkiewicz CL 2003, 'Point counterpoint: Measuring workplace spirituality', in *Journal of Organisational Change Management*, Vol 16 (4), pp. 396–405.

Kruger MP and Hanson BJ 1999, 'A value-based paradigm for creating truly healthy organisations', in *Journal of Organisational Change Management*, Vol 12 (4), pp. 302–312.

Krishnakumar S and Neck CP 2002, 'The 'what', 'why' and 'how' of spirituality in the workplace', in *Journal of Managerial Psychology*, 17 (3), pp. 153–164.

Kristoffersen I, Gerrans P, Clark-Murphy M (2005) The Corporate Social Responsibility and the Theory of the Firm, School of Accounting, Finance and Economics and FIMARC Working paper series, accessed online from http://www.ecu.edu.au/__data/assets/pdf_file/0020/40736/wp0505ik.pdf on 13, April, 2013

Kumar R 2005, *Research methodology :A step-by-step guide for beginners*, 2nd edn., SAGE, London.

Labbs J 1995, 'Balancing spirituality and work', in *Personal Journal*, 74 (9), pp. 60–68.

LaFountain RM and Bartos RB 2002, *Research and statistics made meaningful in counselling and student affairs*. Brooks/Cole, Pacific Grove, CA.

Laffont JJ and Tirole J 1991, 'Auction design and favoritism', in *International Journal of Industrial Organisation*, Vol 9, pp. 9–42.

Lamming R and Hampson J 1996, 'The environment as a supply chain management issue', in H Walker and W Phillips 2006, *Sustainable procurement: Emerging issues*, International Public Procurement Conference Proceedings, 21–23 September.

Lamont G 2002, *The Spirited Business: Success Stories of Soul-Friendly Companies*. London: Hodder and Stoughton

Larson PD and Morris M 2008, 'Sex and salary: A survey of purchasing and supply professionals', in *Journal of Purchasing and Supply Management*, Vol 14, pp. 112–124.

Lau AKW 2011, 'The implementation of social responsibility in purchasing in Hongkong/pearl delta: A case study', in *Strategic Outsourcing: An international journal*, Vol 4 (1), pp.13-46.

Leach, M 1990, 'Philosophical choice', *Journal of Education*, Vol 3 (3), pp. 16–18.

Legarth JB 2001, 'Internet assisted environmental purchasing', in H Walker and W Phillips, 2006, *Sustainable procurement: Emerging issues*, International Public Procurement Conference Proceedings, 21–23 September.

- Li L and Geise K 2005, 'Environmentally responsible public procurement (ERPP) and its implications for integrated product policy (IPP)', in *Journal of Cleaner Production*, Vol 13, pp. 705–715.
- Lincoln V 2000, 'Eco-spirituality: A pattern that connects', in *Journal of Holistic Nursing*, Vol 18(3), pp. 227–244.
- Linton JD, Klassen R, Jayaraman V 2007, 'Sustainable supply chains: An introduction', in *Journal of Operations Management*, Vol 25 (6), pp. 1075–1082.
- Liu HC and Robertson PJ 2011, 'Spirituality in the workplace: Theory and movement', in *Journal of Management Inquiry*, Vol 20 (1), pp. 35–50.
- Lips-Wiersma M 2002, 'Analysing the career concerns of spiritually oriented people: Lessons for contemporary organisations', in *Career Development International*, Vol 7 (7), pp. 385–397.
- Losoncz A 2011, 'Spiritual motivation in management, spirituality and ethics in management', in *Issues in Business Ethics*, Vol 19 (2), pp.75–94.
- Lozano JM and Ribera R 2004, 'A new change for management, a new challenge for spirituality', in SS Nandram and ME Borden 2010, 'Spirituality and business: Exploring possibilities for a new management paradigm', Springer, NewYork.
- Lund Dean K, Fornaciari CJ and McGee JJ 2003, 'Research in spirituality, religion, and work: Walking the line between relevance and legitimacy', in *Journal of Organisational Change Management*, Vol 16 (4), pp. 378–395.
- Macy J 1998, 'The great turning. The Institute of Noetic Sciences', in V Lincoln 2000, 'Eco-spirituality: A pattern that connects', in *Journal of Holistic Nursing*, Vol 18, pp. 227.
- Maharishi Mahesh Yogi 1995a, 'Maharishi University of Management: Wholeness on the move', in DP Harung and HS Heaton 1999, 'The conscious organisation', *The learning organisation*, Vol 6 (4), pp. 157–162.
- Malhotra N, Hall J and Oppenheim P 2002, *Marketing research: An applied orientation*, 2nd edn., Prentice Hall, Australia.
- Malloch TR 2011, 'Spiritual capital and virtuous business leadership,' in *Graziadio Business Review*, Vol 14 (1), <http://gbr.pepperdine.edu/2011/02/spiritual-capital-and-virtuous-business-leadership-with-yales-ted-malloch/>, viewed on 21 May 2012.
- Maltby J and Day L 2001, 'Spiritual involvement and belief: The relationship between spirituality and Eysenck's personality dimensions', in *Personality and Individual Difference*, Vol 30, pp. 187–192.
- Marcic D 1997, *Managing with the wisdom of love*, Berret-Koehler, San Francisco.

Markow F and Klenke K 2005, 'The effects of personal meaning and calling on organisational commitment: An empirical investigation of spiritual leadership'. in F arakas 2009, 'Spirituality and performance in organisations: A literature review', in *Journal of Business Ethics*, Vol 94, pp. 89–106.

Marron DB 1997, 'Buying green: Government procurement as an instrument of environmental policy', in *Public Finance Review*, Vol 25 (3), pp. 285–305.

Marques, J 2005, 'Socializing a capitalistic world: Redefining the bottom line', in *Journal of American Academy of Business*, Vol. 7 (1), p. 283.

Marques J 2006, 'Removing the blinders: A phenomenological study of US-based MBA students' perception of spirituality in the workplace', in *Journal of American Academy of Business*, vol 8, pp. 55–61.

Marques JF 2008, 'Spiritual performance from an organisational perspective: The starbucks way', in *Corporate Governance*, Vol 8 (3), pp. 248–257.

Marques J and Allevato E 2011, 'Systemic thinking from a scientific and spiritual perspective: Toward a new paradigm and eco world order', in *Journal of Global Responsibility*, Vol. 2 (1), pp. 23–45.

Marques J, Dhiman S and King R 2007, 'Spirituality in the workplace: What it is, why it matters, how to make it work for you', in F Karakas 2009, 'Spirituality and performance in organisations: A literature review', in *Journal of Business Ethics*, Vol 94, pp. 89–106.

Martinez VLM, Gresham SL, Mejia A, Robles T, Gloria AM and Castellanos J 2005, *Coping and spirituality: Facilitating collage adjustments for Latina undergraduates*, paper presented at the Annual Conference of the American Psychological Association, August, Washington, DC, www.education.wisc.edu/cp/.../LatinaCopingandSpirituality2005APA.pdf viewed on 15 May 2012.

Maruyama F 2008, *An overview of the higher education system in Japan*, <http://www.zam.go.jp/n00/pdf/nk001001.pdf> viewed on 10 September 2011.

Maslow A 1943, 'A theory of human motivation', in *Psychological Review*, Vol 50, pp. 370–396.

McCrudden C 2004, 'Using public procurement to achieve social outcomes' in *Natural Resources Forum*, Vol 28 (4), pp. 257–267.

McCrudden C 2008, *Buying social justice: using public procurement to advance social, ethical and human rights goals*, Annual Statistical report on United Nations Procurement, <http://www.unops.org/SiteCollectionDocuments/ASR/Sustainable-Procurement-Supplement-ASR-2008.pdf>, viewed on 21 May 2012.

McCallum DC 1856, 'Superintendent's report', in Fleming DJ 2003, *The perception of American employees with regards to workplace spirituality*, dissertation presented for Doctor in Management, University of Phoenix,

<http://www.spiritatwork.org/library/Fleming.pdf> viewed on 15 February 2010.

McCrae RR, Kurtz JE, Yamagata S and Terracciano A 2011, 'Internal consistency, retest reliability and their implications for personality scale reliability, in *Personality and Social Psychology Review*, Vol 15 (1), pp. 28–50.

McCrudden C 2004, 'Using public procurement to achieve social outcomes', in *National Resources Forum*, Vol 28, pp. 257–267.

McGhee JJ 1998, 'The Emergence of secular corporate spirituality', in RA Giacalone and CL Jurkiewicz 2003, *Handbook of workplace spirituality and organisational performance*, ME Sharpe, London.

McKee MC 2008, *Transformational leadership, workplace spirituality and employee well being: A mixed study*, thesis submitted to Saint Mary University, Nova Scotia.

McKee MC, Driscoll C, Kelloway EK 2011, 'Exploring linkages among transformational leadership, workplace spirituality and well being in health care workers', in *Journal of Management, Spirituality and Religion*, Vol 8, pp. 233–255.

McKee MC, Mills JH and Driscoll C 2008, 'Making sense of workplace spirituality: Towards a new methodology', in *Journal of Management Spirituality and Religion*, Vol 5 (2), pp. 190–210.

McMurray AJ, Islam M, Siwar C and Fien J 2009, *Sustainable procurement in the Malaysian private and public sectors*, Australia and New Zealand Academy of Management (ANZAM), 2–4 December.

Melia K. 1997. *Producing 'plausible stories': Interviewing student nurses*. In *Context and method in qualitative research*, eds G Miller and R Dingwall, 26–36. London: Sage

Meehan J and Bryde D 2011, 'Sustainable procurement practice', in *Business Strategy and the Environment*, Vol 20, pp. 94–106.

Michelsen O and Boer L 2009, 'Green procurement in Norway: A survey of practices at the municipal and country level', in *Journal of Environmental Management*, Vol 91, pp. 160–167.

Michelsen O, Fet AM, Dahlsrud A 2006 'Eco-efficiency in Extended Supply chains: A case study of furniture production', *Journal of Environmental Management*, Vol 79(4), pp 290–297.

Milliman J, Czaplewski AJ, Ferguson J 2003, 'Workplace spirituality and employee work attitude', in *Journal of Organisational Change Management*, Vol 16, pp. 426–447.

Min H and Galle WP 1997, 'Green purchasing strategies: trends and implications', in H Walker and W Phillips 2006, *Sustainable procurement: Emerging issues*, International Public Procurement Conference Proceedings, 21–23 September.

Min H and Galle WP 2001 'Green purchasing practices of US firms', in H Walker and W Phillips 2006, *Sustainable procurement: Emerging issues*, International Public Procurement Conference Proceedings, 21-23 September.

Min H and Galle WP 2001a, 'Green purchasing practices of US firms', in *International Journal of Operations and Production management*, Vol 21 (9), pp. 1222–1238.

Mirvis PH 1997, 'Soul work in organisations', in *Organisation Science*, Vol 8, pp. 193–206.

Mitroff I 2003, 'Do not promise religion under the guise of spirituality', in *Organisation*, Vol 10, pp. 375–382.

Mitroff I and Denton EA 1999, *A spiritual audit of corporate America: A hard look at spirituality, religion, and values in the workplace*, Jossey-Bass, San Francisco.

Mitroff I and Denton EA 1999, 'A study of spirituality in the workplace', in *Sloan Management Review*, Vol 40 (4), pp. 83–92.

Moore J 2005, 'Seven recommendations for creating sustainability education at the university level', in *International Journal of Sustainability in Higher Education*, Vol 6 (4), pp. 326–339.

Moore J 2005, 'Seven recommendations for creating sustainability education at the university level', in HL Walker, S Gough, EF Bakker, LA Knight and D McBain 2009, 'Greening operations management: An online sustainable procurement course for practitioners', in *Journal of Management Education*, Vol 33 (3), pp. 348–371.

Moore TW and Casper WJ 2006. 'An examination of proxy measures of workplace spirituality: A profile model of multidimensional constructs', in *Journal of Leadership and Organisational Studies*, Vol 12 (4), pp. 109–118.

Moxley RS 2000, 'Leadership and spirit', in WJ Harrington, RC Preziosi and DJ Gooden 2001, 'Perceptions of workplace spirituality among professionals and executives', in *Employee Responsibilities and Rights Journal*, Vol 13 (3), pp. 155–63.

Murray JG and Cupples VE 2001, 'Environmental purchasing: tools of engagement', in H Walker and W Phillips 2006. *Sustainable procurement: Emerging issues*, International Public Procurement Conference Proceedings, 21–23 September.

Mytko JJ and Knight SJ 1999, 'Body, mind and spirit: Towards the integration of religiosity and spirituality in cancer quality of life research', in *Psycho-Oncology*, Vol 8, pp. 439–450.

Nadesan MH 1999, 'The discourses of corporate spiritualism: An Evangelical capitalism', in RA Giacalone and CL Jurkiewicz 2003, *Handbook of workplace spirituality and organisational performance*, ME Sharpe, London.

Nagel T 1986, *The view from nowhere*, in Johnson RB and Onwuegbuzie 2004 AJ Mixed Methods Research : A Research Paradigm whose Time has come, *Educational Researcher*, Vol 33(7), pp. 14–26.

Nandram SS and Borden M E 2010, *Spirituality and business: Exploring possibilities for a new paradigm*, Springer, Germany.

Narasimhan R and Carter J 1998, 'Environmental supply chain management', in H Walker and W Phillips W 2006, *Sustainable procurement: Emerging issues*, International Public Procurement Conference Proceedings, 21–23 September.

Narayanan Y 2008, *In a city like Delhi: Sustainability and spirituality*, PhD thesis, Murdoch University, Perth, Western Australia.

National Procurement Strategy for Local Government 2003, Office of the Deputy Prime Minister, in M Jackson 2010, 'The power of procurement: Towards progressive procurement, the policy and practice of Manchester City Council', <http://www.eastmidlandsiep.gov.uk/uploads/Publications/Procurement/CLES%20-%20Power%20of%20Procurement%20-%20Manchester.pdf> viewed on 25 July, 2011.

National centre for Research (NC3R) 2006, *Why do a pilot study?*, <http://www.nc3rs.org.uk/downloaddoc.asp?id=400> viewed on 11 May 2011.

Neal J 1997, 'Spirituality in management education: A guide to resources', In *Journal of Management Education*, Vol 21, pp. 121–140.

Neal J and Vallejo MC 2008, 'Family firms as incubators for spirituality in the workplace: Factors that nurture spiritual businesses', in *Journal of Management, Spirituality and Religion*, Vol 5 (2), pp. 115–159.

Neck CP and Milliman JF 1994, 'Thought self-leadership: Finding spiritual fulfilment in organisational life', *Journal of Managerial Psychology*, Vol 9 (6), pp. 9–16.

Noci G 1997, 'Designing 'green' vendor rating systems for the assessment of a supplier's environmental performance', in H Walker H and W Phillips 2006, *Sustainable procurement : Emerging issues*, International Public Procurement Conference Proceedings, 21–23 September.

Norusis, MJ 2008, *SPSS 16.0 Statistical Procedures companion*, Prentice Hall Inc, Chicago.

Nur Y 2003, *Management by virtues: A comparative study of spirituality in the workplace and its impact on selected organisational outcomes*, Proquest Dissertation and Theses (AAT 3094142)

Nunnally, JC 1978, *Psychometric theory*, 2nd edn., McGraw Hill, New York.

nyu.edu *What is Research Design: Part 1*, <http://www.nyu.edu/pages/classes/bkg/methods/005847ch1.pdf> viewed on 20 April 2010.

Nyhan RC 2000), 'Changing the paradigm: Trust and its role in public sector organisations', In *American Public Review of Administration*, Vol 30, pp. 87–109.

O'Brien, C 1999, 'Sustainable production—A new paradigm for a new millennium', in *International Journal of Production Economics*, Vols 60–61, pp. 1–7.

Ochoa A, Fuhr V and Gunther D 2003 'Green purchasing in practice: Experiences and new approaches from the pioneer', in Jhomson and T Jackson 2007, 'Sustainable procurement in practice: Lessons from local government', in *Journal of Environmental Planning and Management*, Vol 50 (3), pp. 421–444.

Orr D 2002, 'Four challenges of sustainability', in *Conversation Biology*, Vol 16, pp. 1457–1460.

Pallant J 2009, *SPSS Survival Manual: A step-by-step guide to data analysis using SPSS*, 2nd edn., Allen & Unwin, NSW, Australia.

Palmer JA 1998, 'Preface' in DE Cooper and JA Palmer (eds.), in Y Narayanan 2008. 'In a city like Delhi: Sustainability and spirituality', PhD thesis, Murdoch University, Perth, Western Australia.

Paloutzian RF and Ellison CW 1982, 'Loneliness, spiritual well being and quality of life', in C Dalaney 2005, 'The spirituality scale', in *Journal of Holistic Nursing*, Vol 23 (2), pp. 145–167.

Pandey A and Gupta RK 2008, 'A perspective of collective consciousness of business organisations', in *Journal of Business Ethics*, Vol 80, pp. 889–898.

Pawar BS 2009, 'Some of the recent organisational behaviour concepts as precursors to workplace spirituality', in *Journal of business ethics*, Vol 88, pp. 245–261.

Pawar BS 2009, 'Individual spirituality, workplace spirituality and work attitudes: An empirical test of direct and interaction effects,' in *Leadership and Organisation Development Journal*, Vol 30 (8), pp. 759–777.

Pawar BS 2009, 'Workplace spirituality facilitation: A comprehensive model', in *Journal of Business Ethics*, Vol 90, pp. 375–386.

Pfeffer J, Veiga JF 1999, 'Putting people first for organisational success', in *The Academy of Management Executive*, Vol. 13 (2), p.37.

Perrone KM, Webb LK, Wright SL, Jackson ZV and Ksiazak TM 2006, 'Relationship of spirituality to work and family roles and life satisfaction among gifted adults', in *Journal of Mental Health Counselling*, 28 (6), pp. 253–268.

Pesonen H 2003, 'Challenges of integrating environmental sustainability issues into business school curriculum: A case study from the University of Jyväskylä, Finland', in HL Walker, S Gough, EF Bakker, LA Knight and D McBain 2009, 'Greening operations management: An online sustainable procurement course for practitioners', in *Journal of Management Education*, Vol 33 (3), pp. 348–371.

Petchsawang P and Duchon D 2012, 'Workplace spirituality, meditation, and work performance', *Journal of Management, Spirituality & Religion*, 9(2), pp. 189-208

Poole E 2009, 'Organisational spirituality—A literature review', in *Journal of Business Ethics*, Vol 84 (4), pp. 577–588.

Polit DF and Beck CT 2004, *Nursing research: Principles and methods*, 7th edn., Lippincott Williams & Willkins, Philadelphia, New York, London.

Prenen ECL 2008, *Green and sustainable public procurement in the Netherlands: An inconvenient truth*, 3rd International Public Procurement Conference Proceedings, 28–30 August.

Preuss L 2007, 'Buying into our future: Sustainability initiatives in local government procurement', in *Business Strategy and the Environment*, Vol 16, pp. 354–365.

Preuss L 2009, 'Addressing sustainable development through public procurement: The case of local government', in *Supply Chain Management: An international Journal*, Vol 14 (3), pp. 213–223.

Preuss L 2009a, 'Addressing sustainable development through public procurement: 'The case of local government'', in *Supply Chain Management: An international Journal*, Vol 14 (3), pp. 213–223.

Probst TM and Strand P 2010, 'Perceiving and responding to job insecurity: A workplace spirituality perspective', in *Journal of Management, Spirituality and Religion*, Vol 7 (2), June 2010, pp. 135–156.

Procurement Circular 2007, *Procurement Solutions: Department of Treasury ACT government*,
http://www.procurement.act.gov.au/__data/assets/pdf_file/0016/16027/2007_08_Sustainable_Procurement.pdf viewed on 15 July 2010.

Pruzan PK and Pruzan M 2007, *Leading with wisdom: Spiritual-based leadership in business*. Sage/Response Books, New Delhi and Greenleaf Publishing, Sheffield, England.

Quatro S 2002, Organisational spirituality normativity as an influence on organisational culture and performance in Fortune 500 firms', in M Fernando M 2005, *Self-actualising workplace spirituality: An empirical study*, 65th Academy of Management Conference, Hawaii.

Rao P and Holt D (2005) Do green supply chains lead to competitiveness and economic performance? In Walker H & Phillips W (2006) Sustainable Procurement: Emerging Issues, International Public Procurement Conference Proceedings, 21-23 September.

Ray M.L 1993, 'Introduction', in DP Harung and HS Heaton 1999, 'The conscious organisation', in *The Learning Organisation*, Vol 6 (4), pp. 157–162.

Raziano DB, Jayadevappa R, Valenzula D, Weiner M and Mourey RL 2001, 'Email versus conventional postal mail survey of geriatric chiefs', in *The Gerontologists*, Vol 41 (6), pp. 799–804.

Reave, L. 2005, 'Spiritual values and practices related to leadership effectiveness', in *The Leadership Quarterly*, Vol. 16(5), pp. 655-687.

Rego A and Cunha MP 2008, 'Workplace spirituality and organisational commitment: An empirical study', in *Journal of Organisational Change Management*, Vol 21 (1), pp. 53–75.

Rhodes K 2006, 'Six components of a model for workplace spirituality,' in *Graziadio Business Report, A Journal of Relevant Information and Analysis*, Vol 9 (2), <http://gbr.pepperdine.edu/062/workplace.html> viewed on 2 March 2010.

Richards TA, Oman D, Hedberg J, Thoresen CE, Bowden J 2006, 'A qualitative examination of a spirituality-based intervention and self management in the workplace', in *Nursing Science Quarterly*, Vol 19 (3), pp. 231–239.

Rimmington M, Smith JC, Hawkins R 2006, 'Corporate social responsibility and sustainable food procurement', in *British Food Journal*, Vol. 108 (10/11), pp. 824–37.

Rooney D and McKeena B (2010) 'The problem of Spirituality in the workplace', in *Wisdom in management conference*, Australian National University, Canberra, Australia, 8-9 July 2010.

Rowntree Foundation 2002, *Achieving community benefits through contracts: Law, policy and practice*, <http://www.jrf.org.uk/sites/files/jrf/d12.pdf> viewed on 13 April 2011.

Sadikan SR 2008, *Sustainable public procurement in Indonesia*, Annual Statistical Report on United Nations Procurement, Sustainable procurement supplement.

Salam MA 2009, 'Corporate social responsibility in purchasing and supply chain', in *Journal of Business Ethics*, Vol 85, pp. 355–370.

Sanford C 1992, 'A self-organizing leadership view of paradigm', in H Ashar and M Lane-Maher 2004, 'Success and spirituality in the new business paradigm', in *Journal of Management Inquiry*, Vol 13 (3), pp. 249.

Sapsford, R 2007, *Survey research*, 2nd edn., SAGE, London.

Sarkis J 2003, 'A strategic decision framework for green supply chain management' In H Walker and W Phillips 2006, in *Sustainable procurement: Emerging issues*, International Public Procurement Conference Proceedings, 21–23 September.

Sarantakos S 2005, *Social research*, 3rd edn., Palgrave Macmillan, New York.

Scott, EL, Agresti AA and Fitchett G 1998, 'Factor analysis of the "Spiritual Well-Being Scale" and its clinical utility with psychiatric inpatients', in *Journal for the Scientific Study of Religion*, Vol 37, pp. 314–321.

Sekaran U 1992, *Research methods for business: A skill building approach*, John Wiley & Sons, INC New York.

Senator Hon Chris Evans 2011, 'Record operating surplus for Australian universities', media release, <http://www.ministers.deewr.gov.au/evans/record-operating-surplus-australian-universities> viewed on 15 April 2012.

Senge PM 1990, 'The fifth discipline: The art and practice of the learning organisation', in DJ Fleming 2003, *The perception of American employees with regards to workplace spirituality*, dissertation presented for Doctor in Management, University of Phoenix, <http://www.spiritatwork.org/library/Fleming.pdf> viewed on 15 February 2010.

Shafritz JM and Ott JS 1996, *Classics of organisation theory*, 4th edn., Harcourt Brace College Publishers, Fort Worth.

Sharma S and Nguen O 1999, 'The biotechnology industry and strategies of biodiversity conservation: The influence of managerial interpretations and risk propensity', in HL Walker S Gough, EF Bakker, LA Knight and D McBain 2009, 'Greening operations management: An online sustainable procurement course for practitioners', in *Journal of Management Education*, Vol 33 (3), pp. 348–371.

Sheep, ML 2006, 'Nurturing the whole person: The ethics of workplace spirituality in a society of organisations', *Journal of Business Ethics*, Vol 66, pp. 357–375.

Sheperis CJ, Young JS and Daniels MH 2010, *Counselling research: Quantitative, qualitative and mixed methods*, Pearson, Sydney.

Shinde US, Shinde JS and Lytle L 2010, 'The impact of organisational spirituality on employee outcomes', in *International Journal of Academic Business Board*, Vol 4 (2), <http://jwpress.com/IJABW/Issues/IJABW-Fall2010.pdf#page=75> viewed on 16 June, 2010.

Simcoe T and Toffel MW 2011, *Public procurement and private certification*, http://www-management.wharton.upenn.edu/henisz/msbe/2011/4_1_Simcoe_Toffel.pdf viewed on 22 August 2011.

Sirgy MJ, Efraty D, Siegel P and Lee DJ 2001, 'A new measure of q'Quality of life (QWL) based on need satisfaction and spillover theories', in *Social Indicator Research*, Vol 55, pp. 241–302.

Sirgy MJ, Widgery RN, Lee DJ and Yu GB 2010, 'Developing a measure of community wellbeing based on perceptions of impact in various life domains', in *Social Indicators Research*, Vol 9, pp. 295–311.

Smith A 1776, *The wealth of nations*, in DJ Fleming 2003, *The perception of American employees with regards to workplace spirituality*, dissertation presented for Doctor in Management, University of Phoenix <http://www.spiritatwork.org/library/Fleming.pdf> viewed on 15 February 2010.

Smith NR 2006, *Workplace spirituality: A complete guide for business leaders*, Axial Age Publishing, Massachusetts.

Sonnino R 2009, 'Quality food, public procurement and sustainable development: The school meal revolution in Rome', in *Environmental and Planning*, Vol 41, pp. 425–440.

Speck B 2005, 'What is spirituality?', in J Crossman 2010, 'Conceptualising spiritual leadership in secular organisational contexts and its relation to transformational, servant and environmental leadership', in *Leadership and Organisational Development Journal*, Vol 31 (7), pp. 596–606.

Staples W 2010, *Public value in public sector infrastructure procurement*, Doctoral Thesis, RMIT University.

Steiner DD and Truxillo DM 1989, 'An improved test of the disaggregation hypothesis of job and life satisfaction', in CL Jurkiewicz and RA Giacalone 2004, 'A values for measuring the impact of workplace spirituality on organisational performance', Vol 49 (2), pp. 129–142.

Stephenson, C 2004, 'Leveraging diversity to maximum advantage: The business case for appointing more women to Boards', in *Ivey Business Journal*, Vol 69 (1), pp. 1–5.

Sustainable Development in Government (SDiG) 2003, 'Report and recommendations of the Sustainable Procurement Task Force (SPTF)', in J Thomson and T Jackson 2007, 'Sustainable procurement in practice: Lessons from local government', in *Journal of Environmental Planning and Management*, Vol 50 (3), pp. 421–444.

Sustainable Procurement Guidelines 2011, accessed from
<http://uq.edu.au/sustainability/docs/greenprocurement/SustProcGuideIntro.pdf>

Sustainable Procurement Guidelines 2012, Government of South Australia State Procurement Board, www.spb.sa.gov.au/public/download.aspx?id=916 viewed on 22 March 2011.

Sustainable Procurement Manual, 2008 *Sustainable procurement: Buying for a better world*,
<http://www.pnuma.org/industria/documentos/Reunion%20SUN/04Resource%20book.final.doc> viewed on 27 November 2009.

Sustainable Procurement Policy 2008,
http://www.lgsaplus.net.au/resources/documents/SC_ballina_sustainable_procurement_policy15040,9.pdf viewed on 15 July 2010.

Sustainable Procurement Task Force 2006, Australian Procurement and Construction Council, Australian and New Zealand Government Framework for Sustainable Procurement,
<http://www.apcc.gov.au/LinkClick.aspx?fileticket=%2FIacfFgL8eQ%3D&tabid=151&mid=497> viewed on 21 May 2011.

Sustainable Purchasing and Supply Summit Conference 2011,
<http://www.spssummit.com/> viewed on 10 February 2012.

Sustainable United Nations 2009, *Sustainable procurement guidelines user's guide*, UNEP, http://ungm.com/Publications/sp/SP_Guidelines_UsersGuide.pdf viewed on 14 September 2010.

Sweet S and Grace-Martin K 2008, *Data analysis with SPSS: A first course in applied statistics*, 4th edn., Allyn & Bacon Publishers.

Szejely EB 1974, 'Creative yoga, karma yoga', in R Cacioppe 2000, *Creating spirit at work: Re-visioning organisational development and leadership*, Part I, *Leadership and Organisation development Journal*, Vol 21, pp. 48–54.

Talbot, LA 1995, *Principles and practice nursing research* Mosby St. Louis.

Tashakkori A and Teddlie C 2006, *Mixed methodology: Combining qualitative and quantitative approaches*, Sage Publications, California.

Techatassanasoontorn AA and Tanvisuth A 2008, *The bottom-up and horizontal spillovers of quality of life from continued ICT use: The case of community technology centres*, Working Papers on Information Systems, ISSN 1535-6078.

Teijlingen ERV and Hundley V 2001, 'The importance of pilot studies', in *Social Research Update*, Issue 35, <http://sru.soc.surrey.ac.uk/SRU35.html> viewed on 15 August 2011.

Thomson J and Jackson T 2007, 'Sustainable procurement in practice: Lessons from local government', in *Journal of Environmental Planning and Management*, Vol 50 (3), pp. 421–444.

Tigner, B 1991, 'EC policy: Opening the bidding', in *International Management* (Europe edn.), Vol 46 (6), pp. 46–49.

Tischler, L 1999, 'The growing interest in spirituality in business: A long-term socioeconomic explanation' in DJ Fleming 2003, *The perception of American employees with regards to workplace spirituality*, dissertation presented for Doctor in Management, University of Phoenix, <http://www.spiritatwork.org/library/Fleming.pdf> viewed on 15 February 2010.

Tischler L 1999, 'The growing interest in spirituality in business: A long-term socioeconomic explanation', in *Journal of Organisational Change Management*, Vol 12, pp. 273–80.

Tharenou P 2000, *Survey studies: Correlational field studies, Choosing a research design*, Monash University.

Thomson J and Jackson T 2007, 'Sustainable procurement in practice: Lessons from local government' in HL Walker, S Gough, EF Bakker, LA Knight and D McBain 2009, 'Greening operations management: An online sustainable procurement course for practitioners', in *Journal of Management Education*, Vol 33(3), pp. 348–371.

Thompson S 2005, 'Habits of spirituality-grounded leaders', in J Crossman 2010, 'Conceptualising spiritual leadership in secular organisational contexts and its relation to transformational, servant and environmental leadership', in *Leadership and Organisational Development Journal*, Vol 31 (7), pp. 596–606.

Thurston M and Eckelman M 2011, 'Assessing greenhouse gas emissions from university purchases', in *International Journal of Sustainability in Higher Education*, Vol. 12, (3), pp. 225–235.

Tombaugh JR, Mayfield C and Durand R 2011, 'Spiritual expression at work: Exploring the active voice of workplace spirituality', in *International Journal of Organisational Analysis*, Vol 19 (2), pp. 146–170.

Towne HR 1886, 'Transactions of The American Society of Mechanical Engineers', in DJ Fleming 2003, *The perception of American employees with regards to workplace spirituality*, dissertation presented for Doctor in Management, University of Phoenix, <http://www.spiritatwork.org/library/Fleming.pdf> viewed on 15 February 2010.

Trochim WMK 2006, *Research methods: Knowledge base*, <http://www.socialresearchmethods.net/kb/> viewed on 20 April 2010.

Trott DC 1996, *Spiritual well being of workers: An exploratory study of spirituality in the workplace*, Proquest Dissertations and Thesis (AAT 9705971) viewed on 23 April 2011.

ULSF 1999, Association of University Leaders for a Sustainable Future: *The Declaration*, Vol 3(1) March.

UNEP 2005, United Nations Environment Program, Sustainable Procurement in the UN System, http://www.unemg.org/Portals/27/Documents/MeetingsDocs/IMG/SusProc/Procurement_GC23.pdf viewed on 18 June 2010.

United Nations Procurement Capacity Development Centre, 2012. Sustainable Public Procurement, http://www.unpcdc.org/media/390120/spp_brief_en_2012-02-06.pdf viewed on 22 May 2012.

United Nations 2002, 'Country profile, Johannesburg Summit' 2002, in J Thomson and T Jackson 2007, 'Sustainable procurement in practice: Lessons from local government', in *Journal of Environmental Planning and Management*, Vol 50 (3), pp. 421–444.

UN Procurement Handbook 2006, e Interagency Procurement Working Group (IAPWG), <http://www.unops.org/SiteCollectionDocuments/Procurement%20docs/UN%20procurement%20practitioners%20handbook.pdf> viewed on 15 September 2011.

University of Hertfordshire 1995, Faculty of Natural Sciences, Department of Environmental Sciences, Sustainable development policy.

Vagstad, S 1995, 'Promoting fair competition in public procurement', in *Journal of Public Economics*, Vol. 58 (2), pp. 283–307.

Van de Ven A and Johnson P 2006, 'Knowledge for theory and practice', in *Academy of Management Review*, Vol 31, pp. 802–821.

- Vandenberghe C 2011, 'Workplace spirituality and organisational commitment: 'Aan integrative model', in *Journal of Management, Spirituality and Religion*, Vol. 8 (3) September 2011, pp. 211–232.
- Vanderstoep SW and Johnston DD 2009, *Research methods for everyday life: Blending qualitative and quantitative approaches*, Jossey-Bass, San Francisco.
- van Weenen H 2000, 'Towards a vision of a sustainable university', in *International Journal of Sustainability inn Higher Education*, Vol 1 (1), pp. 20–34.
- Varnas, A Balfors, B and Faith-Ell, C 2009, 'Environmental consideration in procurement of construction contracts: Current practice, problems and opportunities in green procurement in the Swedish construction industry', in *Journal of Cleaner Production*, Vol 17, pp. 1214–1222.
- Veach TL and Chappell JN 1991, 'Measuring Spiritual Health: A preliminary study' in RA Giacalone and CL Jurkiewicz 2003, *Handbook of workplace spirituality and organisational performance*, ME Sharpe ,London.
- Waddock S 2006, *Leading corporate citizens: Vision, values, value added*, 2nd edn., McGraw-Hill New York.
- Wagner-Marsh F and Conley J 1999, 'The fourth wave: The spiritually-based firm', in *Journal of Organisational Change Management*, Vol 12, pp. 292–302.
- Walker H 2008, *Sustainable procurement: Looking ahead*, 2008 Annual Statistical Report on United Nations Procurement, http://www.undp.org/execbrd/pdf/ASR_2008_supplement.pdf viewed on 24 January 2011.
- Walker H, Bakker E, Knight L, Gough S and Mcbain D 2009, 'Greening operations management: An online sustainable procurement course for practitioners', in *Journal of Management Education*, Vol 33 (3), pp. 348–371.
- Walker H and Brammer S 2009, 'Sustainable procurement in the United Kingdom public sector', *Supply Chain Management: An international Journal*, Vol 14 (2), pp. 128–137.
- Walker H and Brammer S 2012, 'The relationship between sustainable procurement and e-procurement in the public sector in *International Journal of Production Economics* (In press).
- Walker H and Jones N 2012, 'Sustainable supply chain management across the UK private sector', in *Supply Chain Management: An International Journal*, Vol 17 (1), pp.15–28.
- Walker H and Phillips W 2006, *Sustainable procurement: Emerging issues*, International Public Procurement Conference Proceedings, 21–23 September, http://www.ippa.ws/IPPC2/PROCEEDINGS/Article_20_WalkerPhillips.pdf viewed on 18 September 2011.

Walker H and Preuss L 2008, 'Fostering sustainability through sourcing from small business: Public sector perspectives', in *Journal of Cleaner Production*, Vol 16, pp. 1600–1609.

Walsh F 1998, 'Beliefs, spirituality, and transcendence: Keys to family resilience', in DNA Bacchus and LC Holley 2004, 'Spirituality as a coping resources: The experience of professional black women', in *Journal of Ethnic Diversity in Social Work*, Vol 13 (4), pp. 65–84.

Walt FVD 2007, *The relationship between spirituality and job satisfaction*, published Doctoral Dissertation, University of Pretoria.

Walton S, Handfield R and Melnyk S 1998, 'The green supply chain: Integrating suppliers into environmental management processes', in H Walker and W Phillips 2006, *Sustainable procurement :Emerging issues*, International Public Procurement Conference Proceedings, 21–23 September.

WCED 1987, *World Commission on Environment and Development*, Oxford University Press, Oxford.

Wedemeyer RA and Jue R 2002, 'The inner edge: How to integrate your life, your work, and your spirituality for greater effectiveness and fulfilment', in C Driscoll and E Wiebe 2007, Technical spirituality at work: Jacques Ellul on workplace spirituality', in *Journal of Management Inquiry*, Vol 16, pp. 333–348.

Welsh Assembly Government 2004, Welsh procurement initiative: Sustainable public sector procurement guidance 'Buy Now Don't Pay Later—Starting to live Differently', Welsh Assembly Government, Cardiff.

Wilensky H 1960, 'Work, careers and social integration', in *International Social Science*, Vol 12, pp. 543–560.

Wheat, L. W 1991, "Development of a Scale for the Measurement of Human Spirituality", Unpublished Doctoral Dissertation (University of Maryland, College Park)

Wills E 2009, 'Spirituality and subjective well being: Evidences for a new domain in the personal well being index', in *Journal of Happiness Studies*, Vol 10, pp. 49–69.

Williams, RJ 2003, Women on corporate boards of directors and their influence on corporate philanthropy', in *Journal of Business Ethics*, Vol. 42 (1), pp. 1–10.

Winseman AL 2003 Gallup Releases 2003 Spiritual Commitment Data, accessed from <http://www.gallup.com/poll/10573/gallup-releases-2003-spiritual-commitment-data.aspx>

Wolf JT 2004, 'Teach, but don't preach: Practical guidelines for addressing spiritual concerns of students', in *Professional School Counselling*, Vol 7, pp.363–366.

Wong, PTP 2003, President's column, September 2003: Spirituality and meaning at work. Retrieved March 1, 2012, from

http://www.meaning.ca/articles/presidents_column/print_copy/spirituality_work_sept03.htm

Wright T 2002, 'Definitions and frameworks for environmental sustainability in higher education', in HL Walker, S Gough, EF Bakker, LA Knight and D McBain 2009, 'Greening operations management: An online sustainable procurement course for practitioners', in *Journal of Management Education*, Vol 33 (3), pp. 348–371.

Yamini N 2008, *In a city like Delhi: Sustainability and Spirituality*, Doctoral Dissertation, Murdoch University.

Zhu QH, Sarkis J and Geng Y 2005, 'Green supply chain management in China: Pressures, practices and performance', in H Walker and W Phillips 2006, *Sustainable procurement: Emerging issues*, International Public Procurement Conference Proceedings, 21–23 September.

Zimmerman, E. 2004, August 15, 'The many delicate issues of spirituality in the office.' *New York Times*.

Zinnabauer BJ, Pargament KI and Scott AB 1999, 'The emerging meanings of religiousness and spirituality: Problems and prospects', in *Journal of Personality*, Vol 67, pp. 899–919.

Zohar D and Marshall A 2004, *Spiritual capital*, Berett-Koejler Publisher Inc, San Francisco,

Zsidisin GA and Siferd SP 2001, 'Environmental purchasing: A framework for theory development', in *European Journal of Purchasing and Supply Chain Management*, Vol 7, pp. 61–73.

Zsolnai L 2010, 'Ethics needs spirituality', in SS Nandram and ME Borden 2010, *Spirituality and business: Exploring possibilities for a new management paradigm*, Springer, New York.

Every reasonable effort has been made to acknowledge the owners of copyright material. I would be pleased to hear from any copyright owner who has been omitted or incorrectly acknowledged.

APPENDIX A1

PLAIN LANGUAGE STATEMENT

Project Title: The relationship between Spirituality and Sustainable Procurement in Australian Higher Education Sector

Investigators: Mansi Mansi (PhD degree student, mansi.mansi@rmit.edu.au, (03 99255843), Professor Adela J McMurray (Project supervisor: RMIT University, adela.mcmurray@rmit.edu.au 03 9925 5946)

Dear Participant,

You are invited to participate in a PhD research project being conducted by RMIT University, which will take approximately 15-20 minutes to complete. These two pages are to provide you with an overview of the proposed research. The aim of my research is to investigate the relationship between spirituality and sustainable procurement. The objective is to identify whether there is a relationship between the two variables i.e Spirituality & Sustainable Procurement in Australian Higher Education Sector and if yes; to what extent. There are 85 questions in the survey based on spirituality and sustainable procurement. For your convenience, an example is provided before every section. Most questions require a tick and few questions require brief description of 2-3 lines. The questions are designed to gather the information related to Spirituality and Sustainable Procurement. You will also receive the pre-paid reply envelope attached with the survey to send it back to me with addressed mentioned on it.

Please read these pages carefully and be confident that you understand its contents before deciding whether to participate. If you have any questions about the project, please ask one of the investigators identified above. This research will distribute up to 300 questionnaires in Australia. I am currently a research student in the school of management at RMIT University. This project is being conducted as a part of my PhD degree. My principle supervisor for this project is Professor Adela J McMurray. The project has been approved by the RMIT Business College Human Ethics Advisory Network.

There are no perceived risks associated with participation outside the participants' normal day-to-day activities. The participants in this research are procurement professionals or their equivalent. As a matter of fact, your responses will contribute to understanding of the relationship between spirituality and sustainable procurement in Australian Higher Education Sector. The findings of this study will be disseminated in conferences, book chapters and published in journals.

If you are unduly concerned about your responses or if you find participation in the project distressing, you should contact my supervisor as soon as convenient. My supervisor will discuss your concerns with you confidentially and suggest appropriate follow-up, if necessary.

Participation in this research is entirely voluntary and anonymous; you may withdraw your participation and any unprocessed data concerning you at any time, without prejudice. There is no direct benefit to the participants as a result of their participation. However, I will be delighted to provide you with a copy of the research report upon request as soon as it is published.

Your privacy and confidentiality will be strictly maintained in such a manner that you will not be identified in the thesis report or any publication. Any information that you provide can be disclosed only if (1) it is to protect you or others from harm, (2) a court order is produced, or (3) you provide the researchers with written permission. Interview data will be only seen by my supervisor and examiners who will also protect you from risk.

To ensure that data collected is protected, the data will be retained for five years upon completion of the project after which time paper records will be shredded and placed in a security recycle bin and electronic data will be deleted/destroyed in a secure manner. All hard data will be kept in a locked filing cabinet and soft data in a password protected computer in the office of the investigator in the research lab at RMIT University. Data will be saved on the University network system where practicable (as the system provides a high level of manageable security and data integrity, can provide secure remote access, and is backed up on a regular basis). Only the researcher will have access to the data. Data will be kept securely at RMIT University for a period of five years before being destroyed.

You have right to withdraw your participation at any time, without prejudice. You have the right to have any unprocessed data withdrawn and destroyed, provided it can be reliably identified, and it does not increase the risk for the participant. Participants also have the right to have any questions, in relation to the project and their participation, answered at any time.

I am assuring you that responses will remain confidential and anonymous. If you have any queries regarding this project please contact me at +61 3 99255843 or +61 433644813 or email me at mansi.mansi@rmit.edu.au or my supervisor Professor Adela J McMurray, phone 3 9925 4297, email adela.mcmurray@rmit.edu.au or the Chair of the RMIT Business Human Research Ethics Sub-committee Associated Professor Roslyn Russell, phone 03 9925 5187, email rdur@rmit.edu.au

Thank you very much for your contribution to this research.

Yours Sincerely,
Mansi Mansi
PhD Candidate
School of Management
RMIT University, level
13, 239 Bourke Street,
Melbourne, VIC 3000

Section 1: Spirituality

Tick the following questions, as a guide please note that 1 stands for never/almost never, 2 seldom, 3 occasionally, 4 frequently, 5 constantly (Never—1—2—3—4—5 constantly)

Example. Job promotion is more important than job satisfaction 1 (2) 3 4 5 6 7

This shows you seldom feel that job promotion is more important than job satisfaction

Never---Constantly

| | | | | | | |
|----|---|---|---|---|---|---|
| 1 | I experience a sense of the sacred in living things | 1 | 2 | 3 | 4 | 5 |
| 2 | I experience a sense of connection with other living things. | 1 | 2 | 3 | 4 | 5 |
| 3 | I set aside time for personal reflection and growth. | 1 | 2 | 3 | 4 | 5 |
| 4 | I find meaning in life by creating close relationships | 1 | 2 | 3 | 4 | 5 |
| 5 | I experience a feeling of being whole and complete as a person. | 1 | 2 | 3 | 4 | 5 |
| 6 | I listen closely when people tell me their problems | 1 | 2 | 3 | 4 | 5 |
| 7 | I read articles on health and inner peace. | 1 | 2 | 3 | 4 | 5 |
| 8 | I share my private thoughts with someone else. | 1 | 2 | 3 | 4 | 5 |
| 9 | I put the interests of others before my own when making a decision. | 1 | 2 | 3 | 4 | 5 |
| 10 | I actively seek a sense of purpose in my life. | 1 | 2 | 3 | 4 | 5 |

Please tick the following questions: 1-strongly disagree, 2-disagree, 3-neutral, 4-agree, 5-strongly agree

Strongly disagree---strongly agree

| | | | | | | |
|----|--|---|---|---|---|---|
| 11 | I value the relationship between all living things | 1 | 2 | 3 | 4 | 5 |
| 12 | Being truthful is important to a successful life | 1 | 2 | 3 | 4 | 5 |
| 13 | We should give to others in need | 1 | 2 | 3 | 4 | 5 |
| 14 | It is important that we be sensitive to pain and suffering | 1 | 2 | 3 | 4 | 5 |
| 15 | It is important that each of us find meaning in our lives | 1 | 2 | 3 | 4 | 5 |
| 16 | All forms of life are valuable | 1 | 2 | 3 | 4 | 5 |
| 17 | I feel sad when I see someone else in pain | 1 | 2 | 3 | 4 | 5 |
| 18 | I find the world of nature boring | 1 | 2 | 3 | 4 | 5 |
| 19 | I feel guilty when I don't tell the truth | 1 | 2 | 3 | 4 | 5 |
| 20 | I enjoy guiding young people | 1 | 2 | 3 | 4 | 5 |
| 21 | My Organisation's culture is people oriented | 1 | 2 | 3 | 4 | 5 |
| 22 | My Organisation's culture is supportive | 1 | 2 | 3 | 4 | 5 |
| 23 | My Organisation's culture is fair | 1 | 2 | 3 | 4 | 5 |
| 24 | My Organisation desires to be a good corporate citizen | 1 | 2 | 3 | 4 | 5 |

Section 2: Sustainable Procurement

Rate the following: **As a guide please note**, that 1 stands for strongly disagree, 2 disagree, 3 disagree somewhat, 4 undecided, 5 agree somewhat, 6 agree and 7 strongly agree.

Example. Group success is more important than individual success 1 (2) 3 4 5 6 7

This shows you disagree that group success is more important than individual success.

Currently our purchasing function:

Strongly disagree---- strongly agree

| | | | | | | |
|----|---|---|---|---|---|---|
| 25 | uses a life-cycle analysis to evaluate the environmental friendliness of products and packaging | 1 | 2 | 3 | 4 | 5 |
| 26 | participates in the design of products for disassemble | 1 | 2 | 3 | 4 | 5 |
| 27 | asks suppliers to commit waste reduction goals | 1 | 2 | 3 | 4 | 5 |
| 28 | participates in the design of the products for recycling or reuse | 1 | 2 | 3 | 4 | 5 |
| 29 | reduces packaging material | 1 | 2 | 3 | 4 | 5 |
| 30 | purchases recycled packaging | 1 | 2 | 3 | 4 | 5 |
| 31 | purchases recycling that are of lighter weight | 1 | 2 | 3 | 4 | 5 |
| 32 | purchases from minority/women-owned business enterprise (MWBE) suppliers | 1 | 2 | 3 | 4 | 5 |
| 33 | has a formal MWBE supplier purchase program | 1 | 2 | 3 | 4 | 5 |
| 34 | visits suppliers' plants to ensure that they are not using sweatshop labor | 1 | 2 | 3 | 4 | 5 |
| 35 | ensures that suppliers comply with child labor laws | 1 | 2 | 3 | 4 | 5 |
| 36 | asks suppliers to pay a 'living wage' greater than a country's or region's minimum wage | 1 | 2 | 3 | 4 | 5 |
| 37 | volunteers at local charities | 1 | 2 | 3 | 4 | 5 |
| 38 | donates to philanthropic organisation | 1 | 2 | 3 | 4 | 5 |
| 39 | helps to increase the performance of suppliers in the local community | 1 | 2 | 3 | 4 | 5 |
| 40 | ensures that suppliers locations are operated in a safe manner | 1 | 2 | 3 | 4 | 5 |
| 41 | ensures that safe incoming movement of product to our facilities | 1 | 2 | 3 | 4 | 5 |
| 42 | invents a second source of supply to gain competitive advantage | 1 | 2 | 3 | 4 | 5 |
| 43 | exaggerates the seriousness of a problem to gain concessions | 1 | 2 | 3 | 4 | 5 |
| 44 | purposefully misleads a sales person in a negotiation | 1 | 2 | 3 | 4 | 5 |
| 45 | uses obscure contract terms to gain an advantage over suppliers | 1 | 2 | 3 | 4 | 5 |
| 46 | accepts meals from a supplier even if it is not possible to reciprocate | 1 | 2 | 3 | 4 | 5 |
| 47 | shares information about suppliers with their competitors | 1 | 2 | 3 | 4 | 5 |
| 48 | shows favouritism when selecting suppliers | 1 | 2 | 3 | 4 | 5 |

My department's involvement in socially responsible purchasing has been motivated by:

Strongly disagree---- strongly agree

| | | | | | | |
|----|--|---|---|---|---|---|
| 49 | the examples top management provides | 1 | 2 | 3 | 4 | 5 |
| 50 | requirement made by senior management | 1 | 2 | 3 | 4 | 5 |
| 51 | top-down initiatives | 1 | 2 | 3 | 4 | 5 |
| 52 | social programs that our customer have in place | 1 | 2 | 3 | 4 | 5 |
| 53 | customers who seeks socially responsible suppliers | 1 | 2 | 3 | 4 | 5 |
| 54 | Increased awareness of social issues among customers | 1 | 2 | 3 | 4 | 5 |
| 55 | employee initiatives | 1 | 2 | 3 | 4 | 5 |
| 56 | championing efforts by individual employees | 1 | 2 | 3 | 4 | 5 |
| 57 | current government legislation | 1 | 2 | 3 | 4 | 5 |

| | | | | | | |
|----|---|---|---|---|---|---|
| 58 | the threat of future government legislation | 1 | 2 | 3 | 4 | 5 |
| 59 | targeted actions by future groups | 1 | 2 | 3 | 4 | 5 |
| 60 | the morals of individual employees | 1 | 2 | 3 | 4 | 5 |
| 61 | the personal desires of employees to do what is right | 1 | 2 | 3 | 4 | 5 |
| 62 | a personal sense of obligation among employees | 1 | 2 | 3 | 4 | 5 |
| 63 | the underlying values of employees | 1 | 2 | 3 | 4 | 5 |

Please Tick:

64: **How would you describe your spirituality?** Very Strong ☐ Strong ☐ Medium ☐ Unsure ☐ Not Spiritual ☐

65: **Gender:** Male ☐ Female ☐

66: **My age bracket (years):** 15-25 ☐ 26-35 ☐ 36-50 ☐ 51-60 ☐
61 and above ☐

67: **I am working in this role for:** <2 years ☐ 2-5 years ☐ 5-8 years ☐ 8-12years ☐
12-15years ☐ 15 and above ☐

68: **My Current Position/Title in this organisation:** -----

69: **My Highest Qualification:** PhD ☐ Masters ☐ Bachelors ☐ Diploma ☐
TAFE ☐ Secondary ☐ Other ☐

70: **My Annual purchasing expenditure for this organisation (in AUD\$): (Approx)**
\$1-25,000 ☐ \$ 25,001-50,000 ☐ \$50,001-75,000 ☐
\$75,001-100,000 ☐ \$100,000 and above ☐

-----THANK YOU-----

APPENDIX A 2

PUBLICATIONS & CONFERENCES

Mansi M and McMurray AJ (2011) "Meditation and Workplace Creativity: A Potential Relationship" *Proceedings of the 25'th Australia and New Zealand Academy of Management (ANZAM)*, 7-9 December, Christchurch.

Mansi M and McMurray AJ (2009) Meditation and Its Relationship within the Workplace, *Proceedings of the 23'rd Australia and New Zealand Academy of Management (ANZAM)*, 2-4 December, Melbourne.

Mansi M and McMurray AJ (2010) Meditation and Workplace Creativity Relationships, *Proceedings of the Inaugural Wisdom in Management Conference: An Interdisciplinary Forum on Wisdom in Leadership, Management and Organisation Studies*, Australian National University (ANU) July 8-9, 2010, Canberra.

Mansi M and Pandey R (2010) Theoretical foundations for Corporate Social Responsibility and Workplace Spirituality: A Research Agenda, *Societas Ethica Conference: 47'th European Society for Research in Ethics Conference*, 19-22 August, Arnoldshain, Germany.

Pandey R, Taylor D and Mansi M (2011) CEO characteristics and corporate social performance: evidence from listed Indian companies, eighth AIMS conference, 1-3 January, IIM Ahmedabad, India.